

CANADA
DEPARTMENT OF MINES
MINES BRANCH

HON. W. TEMPLEMAN, MINISTER; A. P. LOW, LL.D., DEPUTY MINISTER;
EUGENE HAANEL, PH.D., DIRECTOR.

ANNUAL REPORT
ON THE
MINERAL PRODUCTION OF CANADA

During the Calendar Year

1906



OTTAWA
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[No. 26b—1908]

No. 26.

Dr. EUGENE HAANEL,
Director of Mines,
Ottawa.

SIR,—I beg to hand you herewith, the annual report, giving complete and revised information descriptive of the mineral production in Canada during the calendar year ending December 31, 1906. Much of the material presented herewith has already appeared in other forms, a preliminary statement of the mineral production during 1906 having been compiled and issued early in March 1907.

Owing to the fact that mining companies frequently do not know the actual results of production until several months after the ore is shipped, and to the difficulties incidental to the obtaining of information through correspondence, it naturally follows that complete data relating to the mineral industries cannot be obtained until well on in the year following that dealt with, so that the issue of the final report is necessarily delayed. In the present instance, however, the delay has been regrettably prolonged.

Mr. Ingall, formerly in charge of the Mines Section of the Geological Survey, was absent on sick leave during the first half of the year following the period dealt with herein, and on June 19, the work of the Division was transferred to the Mines Branch of the newly organized Department of Mines. Mr. Ingall relinquished his position as officer in charge of the Section, and was transferred to field duties in the Geological Survey Branch, while Mr. Denis was detached, to take charge of the collection of coal samples for the work of investigation of fuels by the Mines Branch.

In addition to the collection of the material, the compilation of the statistics, and the preparation of the reports of the Section, the staff has been kept busy in many other kindred directions, such as answering numerous inquiries, both through correspondence and in person regarding the mineral resources, and the mining and metallurgical industries of the Dominion, as well as in collecting, filing, and indexing all available information regarding the same. The checking of the reports from the assay office at Vancouver has also been added to the duties of the Division.

The desirability of improving and increasing the scope of the statistical work, and the necessity—for that purpose—of increasing the present depleted staff, have been clearly set forth in your Summary

7-8 EDWARD VII., A. 1908

Report on the work of the Mines Branch for the fiscal year 1907-8, and need not be further referred to, except to reiterate the necessity of having officers permanently attached to the Department to carry on, and keep up to date the work indicated in the general report on the Mining and Metallurgical Industries of Canada (No. 24)—now in the press.

I am, Sir,

Your obedient servant,

JOHN McLEISH.

Division of Mineral Resources and Statistics,

Ottawa, July 23, 1908.

EXPLANATORY NOTES.

YEAR AND TON USED.

The year referred to throughout this report is the calendar year, except for the figures of imports, which refer to the fiscal year ending June 30. The ton is that of 2,000 pounds, unless otherwise stated.

EXPORTS AND IMPORTS.

The figures given throughout the report referring to exports and imports are compiled from data obtained from the reports of the Customs Department, and will occasionally show discrepancies, which, however, there are no means of correcting.

The exports and imports formerly entered under the headings of each province did not necessarily represent the production or consumption of the province; e.g., material produced in Ontario was often shipped from Montreal and entered there for export, so falling under the heading, Quebec.

NOTE.—N.E.S. = Not elsewhere specified.

VALUES ADOPTED.

The values of the metallic minerals produced, as per returns to this Department, are calculated on the basis of their metallic contents at the average market price of the metal for the current year in the New York market. Spot values have been adopted for the figures of production of the non-metallic minerals.

GENERAL NOTES.

As in the past, care is taken to avoid interference with private interests in the manner of publishing results, and all returns of production of individual mines are treated as confidential, unless otherwise arranged with those interested. The confidence of the mining community, thus gained, has resulted in an increasingly general response to our circulars, although, to complete our data, personal application is still advisable in a few instances, and a yet more prompt response on the part of all applied to, will help still further towards an earlier publication of the material.

The figures given throughout the report are based as far as possible upon returns obtained direct from the various operators, or from official data, and the totals are checked by comparison with railway shipments, exports, and all other available sources of information. It can be, therefore, fairly claimed that they are as accurate as it is possible to make such figures.

After investigation of the subject we have, however, found that in the nature of things, export and railway figures can only be taken as approximately correct in most instances. In the case of the export figures entries are made, as a rule, by those having no technical knowledge of mineral substances, and in the case of the railways but few of the shipments are actually weighed, so that car-load lots, for instance, may differ considerably from the theoretical load of the car.

CORRECTIONS—ALTERATIONS.

Corrections and alterations have been made throughout this report wherever they seemed to be called for, according to more complete and reliable data, available since previous issues.

The tabulated statement given in the folded sheet at the beginning of the report represents a compilation of all the similar statements found in previous reports, re-modelled and further revised wherever possible.

INTRODUCTION.

It can truly be said that the condition of the mining industry in Canada in 1906 was one of great prosperity, and that it, in fact, achieved greater progress, and gave bigger results, than during any previous year on record. In 1905, the total mineral output in Canada aggregated \$69,078,999, as compared with a little over \$60,000,000 in 1904; but in 1906, the output reached a total value of \$79,286,697, an increase of \$10,207,698, or 14·7 per cent over the production of the previous year. This large increase is particularly gratifying because it occurred despite a continued falling off in the total gold output of the country. There was, during the year, an active demand for nearly all mining products, and the higher prices realized, especially for the metals and their ores, not only helped to increase the actual value of the year's output, but also greatly stimulated development and prospecting throughout the country.

The total annual mineral production since 1895 is shown in the general table (folded herewith). The value of the production in 1895 was \$20,505,917. A steady annual increase in production is shown during the following years, until a maximum output of \$65,804,611 was reached in 1901. The next three years showed slight decreases, until in 1904 the production had fallen to \$60,073,897. The next year, however, a large increase placed the output beyond the former high mark, followed by a still larger increase in 1906.

Examining the statistics of production during the year under review, in detail, we find that \$41,949,563, or 52·9 per cent of the total value, is to be attributed to the value of the metals contained in the metallic ores shipped; \$37,037,134, or 46·7 per cent of the total value, was contributed by the non-metallic minerals, of which \$11,530,528 represented the value of the structural or building materials and clay products, and \$25,506,606 the value of the minerals such as coal, asbestos, gypsum, petroleum, natural gas, etc., etc. The relative importance in value of output of the different items contributing to the total mineral production is shown in the following table, entitled 'Proportionate value of different mineral products.'

7-8 EDWARD VII., A. 1908

PROPORTIONATE VALUE OF DIFFERENT MINERAL PRODUCTS, 1906.

Products.	Contri- buting over 15 p. c.	Contri- buting between 10 p. c. and 1 p.c.	Contri- buting under 1 p. c.
1 Coal.....	24·88		
2 Gold.....	14·51		
3 Copper.....	13·52		
4 Nickel	11·28		
5 Silver.....		7·14	
6 Bricks		5·17	
7 Portland cement.....		3·99	
8 Lead		3·89	
9 Asbestos and Asbestic.....		2·59	
10 Pig iron.....		2·35	
11 Building stone.....		2·31	
12 Lime.....		1·27	
13 Petroleum.....			0·96
14 Gypsum.....			0·81
15 Natural gas.....			0·74
16 Sewer pipe.....			0·66
17 Salt.....			0·42
18 Mica.....			0·38
19 Tiles.....			0·36
20 Granite.....			0·35
21 Limestone for flux.....			0·32
22 Corundum.....			0·25
23 Sundry under 1 p. c.....			1·85
Total.....	64·19	28·71	7·10

It will be observed that nearly one-fourth of our total mineral production is to be attributed to the mining of coal. Gold, which in 1903 and several preceding years occupied first place in point of value, contributed about $14\frac{1}{2}$ per cent of the total, and is closely followed by copper with $13\frac{1}{2}$ per cent, and nickel over 11 per cent; while silver and lead together, accounted for about 11 per cent of the total.

To the metallic ores, together with the fuels, therefore, is to be credited over 79 per cent of our total output. The relative importance of the other items is clearly set forth in the table, and does not require special reference except as regards pig iron. From a metallurgical point of view, the production of pig iron is a much more important industry than is here set forth, ranking probably in second place, but as a large proportion of the iron is made from imported ore, only that quantity that can be attributed to Canadian ore has been included in these general tables.

Comparing the mineral production in 1906 with the production in 1905, large increases are shown in nearly all the important mineral products, the chief exceptions being gold, lead with a decreased output though a higher aggregate value, and petroleum. Thirteen items show a total increase of \$12,292,040, and four items a decrease of \$2,870,965. These are shown in tabular form as follows, while in a separate table

SESSIONAL PAPER No. 26b

the percentage increases or decreases in both quantity and value are shown.

INCREASES AND DECREASES IN VALUE OF PRODUCTION IN 1906 AS COMPARED WITH 1905.

Products.	Increases.	Decreases.
	Value	Value.
Copper.....	\$3,222,814	
Gold.....		\$2,657,075
Pig iron (from Canadian ore).....	824,400	
Lead.....	412,555	
Nickel.....	1,398,308	
Silver.....	2,044,572	
Zinc.....		115,400
Asbestos and asbestic.....	556,884	
Coal.....	2,211,756	
Corundum.....	55,820	
Gypsum.....	57,126	
Natural gas.....	203,962	
Petroleum.....		94,268
Pyrites.....	44,504	
Salt.....	8,272	
Cement, natural.....		4,222
Cement, Portland.....	1,251,067	
Total.....	12,292,040	2,870,965

PROPORTIONAL INCREASES AND DECREASES OF DIFFERENT MINERAL PRODUCTS 1906-1905.

Products.	QUANTITY.		VALUE.	
	Increase.	Decrease.	Increase.	Decrease.
	p.c.	p.c.	p.c.	p.c.
Metallic:—				
Copper.....	15·630		43·055	
Gold.....		18·765		18·765
Pig iron (from Canadian ore).....	53·527		79·874	
Pig iron (from both Canadian and imported ore).....	13·916		22·855	
Lead.....		3·968	15·413	
Nickel.....	13·851		18·519	
Silver.....	41·466		56·559	
Non-metallic:—				
Asbestos and asbestic.....	20·394		37·045	
Coal.....	12·628		12·623	
Corundum.....	38·321		37·424	
Gypsum.....	6·075		9·745	
Mica.....			70·512	
Natural gas.....			53·736	
Petroleum.....		10·147		11·012
Salt.....	13·991		2·578	
Portland cement.....	57·422		65·372	
Granite.....			23·028	

An important feature of the mining industry during 1906 was the large increase in the prices of the metals during the year, as evidenced by the following quotations. The average prices of the chief metals for 1905 were as follows: silver 60·35 cents per ounce; copper 15·59 cents per pound; lead 4·7 cents per pound; spelter 5·82 cents per pound; nickel 40 cents per pound. During 1906, the prices of all these metals advanced considerably, and in December, 1906, the quotations were as follows: silver over 70 cents per ounce; copper over 22 cents per pound; lead 5·75 cents per pound; spelter 6·4 cents per pound; and nickel from 45 to 50 cents per pound. The higher prices are also clearly shown in the table of proportional increases, where it is seen that while copper increased about 15 per cent in quantity, the increase in total value was over 13 per cent. In the case of lead a decrease in quantity of nearly 4 per cent is shown, but the aggregate value increased over 15 per cent. There was an increased output of silver of 41 per cent in quantity, and over 56 per cent in value, and in nickel an increase of nearly 14 per cent in quantity and over 18 per cent in value. The largest proportional increases are shown by mica, Portland cement, natural gas, and silver.

Although the mining bureaus of several of the provinces publish very complete mining statistics, these are unfortunately neither compiled nor valued on a uniform basis, and comparisons are not easily made. The statistics of production presented herewith, however, being valued on a uniform basis for the whole of Canada, it is possible to compare the different provinces in their importance as mineral producers, and the following table is presented showing the production by provinces for the years 1905 and 1906.

MINERAL PRODUCTION BY PROVINCES 1905-1906.

Province.	1905.		1906.	
	Value of Production.	Per cent of total.	Value of Production.	Per cent of total.
	\$		\$	
Nova Scotia.....	11,507,047	16·66	12,894,303	16·26
New Brunswick.....	559,035	·81	646,328	0·82
Quebec.....	4,405,975	6·38	5,242,058	6·61
Ontario.....	18,833,292	27·26	25,111,682	31·67
Manitoba, Alberta, Saskatchewan and Yukon...	11,387,642	16·48	10,092,726	12·73
British Columbia.....	22,386,008	32·41	25,299,600	31·91
Total.....	69,078,999	100·00	79,286,697	100·00

SESSIONAL PAPER No. 26b

The principal change to be noted in 1906 compared with 1905, is the relatively larger output in the Province of Ontario in 1906, this province now having practically as large an output as British Columbia. In fact, were the production of iron in Canadian furnaces from imported ore to be included as a Canadian mineral production, the province of Ontario would undoubtedly take first place, and the relative importance of Nova Scotia would also be very considerably increased. Also the relative importance of Quebec Province would be somewhat augmented were aluminium included, of which there is a large production at Shawenegan Falls, from imported bauxite.

A very large proportion of the mineral production in Canada is exported, and the two tables following have been compiled from the Trade and Navigation reports, the first showing the exports during the calendar year, arranged by mineral products, and the second showing the exports during the fiscal year classified according to destination of shipments.

EXPORTS.

MINERALS AND MINERAL PRODUCTS OF CANADA DURING CALENDAR YEAR 1906.

Products.	Value.	Products.	Value.
Aluminium	\$ 901,357	Manufactures of metals other than iron and steel.	\$ 55,183
Antimony ore	17,064	Mica.....	581,919
Arsenic	5,981	Mineral pigments.....	2,379
Asbestos.....	1,689,257	" water	5,629
Barytes.....	6,750	Nickel.....	2,534,684
Bricks.....	6,541	Oil, crude	141
Cement	7,551	" refined.....	1,401
Clay, Mfgs of.....	125	Ores unspecified....	384,629
Chromite.....	10,188	Platinum.....	14,888
Coal.....	4,738,497	Phosphate.....	
Coke.....	168,571	Plumbago, crude	2,468
Copper.....	7,303,366	" mfrs. of.,.....	5,274
Feldspar.....	60,312	Pyrites... ..	65,349
Gold	11,223,781	Salt	3,437
Grindstones.....	31,978	Sand and gravel	139,712
" rough.....	9,281	Silver.....	5,686,144
Gypsum, crude.	462,814	Stone, unwrought.....	3,312
" ground.....	2,934	" wrought.....	24,460
Iron and steel....	1,552,963	Sulphuric acid.....	762
Iron ore.....	149,177	Other articles.....	146,337
Lead.....	736,007		
Lime.....	57,072		
Manganese ore....	925	Total	38,800,900

EXPORTS.

DESTINATION OF MINE PRODUCTS DURING THE FISCAL YEAR 1905-1906.

Destination.	Value.	Destination.	Value.
United States.....	\$ 32,869,004	Mexico	\$ 11,235
Great Britain.....	1,475,839	British West Indies. . . .	7,394
Newfoundland.....	468,383	Australia.....	5,927
Germany.....	124,257	Austria Hungary.....	4,950
China.....	114,270	Cent. Am States	2,000
Belgium.....	91,885	Holland	1,506
Japan.....	81,185	Norway	450
Bermuda.....	71,609	New Zealand	398
France.....	56,447	Hong Kong	280
St. Pierre Miquelon..	26,985	British Guiana.....	15
Italy.....	24,907		
British Africa	18,452	Total	\$ 35,469,631
Cuba.....	12,253		

As would naturally be expected, the first table shows that the metallic ores constitute the bulk of the exports, while the second table indicates that over 92 per cent of the total exports went to the United States, and only 4 per cent to Great Britain.

There is but one metal refinery in Canada, viz., at Trail, British Columbia, at which fine gold, fine silver and pig lead are produced ; but the great bulk of the products of the metallurgical furnaces in this province are shipped to the United States for refining. In Ontario also, practically all the metallic ore production, comprising chiefly the nickel copper ores of Sudbury district, and the rich silver ores of Cobalt, though partially reduced in Canada, are ultimately exported to the United States or Great Britain for refining. So also many of the non-metallic minerals, asbestos, gypsum, mica, corundum, are largely exported.

Statistics of imports of minerals and mineral products during the fiscal year ending June 30, 1906, compiled from the same source, are shown in the last table.

Since we export practically all our metallic ores, it naturally follows that we are compelled to import a large value in metals and their manufactures. Thus we find that in 1905-06, out of a total importation of minerals and mineral products of \$89,389,504, iron and steel and their manufactures make up over 43 millions, while coal and coke account for another 20 millions. Copper, gold, lead, brass, tin, zinc, and their manufactures, make up nearly ten millions more.

SESSIONAL PAPER No. 26b

IMPORTS.

MINERAL AND MINERAL PRODUCTS FOR FISCAL YEAR 1905-1906.

Products.	Value.	Products.	Value.
Alumina.....	\$ 194,083	Lime.....	\$ 93,630
Alum and aluminous cake.....	51,914	Litharge.....	39,836
Aluminium.....	192,044	Lithographic stone.....	6,772
Antimony.....	42,517	Manganese, oxide of.....	5,508
" salts.....	13,780	Magnesia.....	8,727
Arsenic.....	19,169	Marble and mfrs. of.....	189,589
Asbestos and mfrs. of.....	137,974	Mercury.....	69,505
Asphaltum.....	172,641	Metallic alloys—	
Bells and gongs.....	109,129	Babbitt metal.....	59,662
Bismuth.....	949	Brass and mfrs. of.....	1,785,005
Blast furnace slags.....	19,005	Britannia metal.....	40,462
Borax.....	78,277	German silver.....	84,295
Bricks and tiles.....	460,410	Type metal.....	8,675
" fire.....	539,962	Mineral and bituminous	
Buhrstones.....	2,661	substances, N.O.P.....	77,694
Cement.....	995,731	Mineralogical specimens.....	726
Chalk, prepared.....	32,906	Mineral and metallic pig-	
Clays.....	220,504	ments, paints and colours.....	1,237,796
Coal.....	19,153,832	Mineral water, including	
" tar pitch.....	154,628	Aerated water.....	178,639
Coke.....	1,311,375	Nickel.....	15,976
Copper and mfrs. of.....	3,102,157	Ores of metals, N.E.S.....	2,270,036
Cryolite.....	22,793	Paraffine wax.....	9,721
Crucibles, clay or plumbago.....	32,950	" candles.....	15,804
Chloride of lime.....	59,315	Petroleum and products of.....	2,575,350
Earthenware.....	1,692,359	Phosphate (fertilizer).....	20,497
Electric carbons.....	118,757	Platinum, mfrs. of.....	54,494
Emery.....	63,861	Precious stones.....	1,601,545
Feldspar, quartz, flint, etc.....	30,801	Pumice.....	9,053
Fullers earth.....	4,644	Salt.....	412,019
Fossils.....	15	Saltpetre.....	109,005
Gold and silver and mfrs. of.....	555,701	Sand and gravel.....	173,727
Graphite and mfrs. of.....	55,756	Slate and mfrs. of.....	112,941
Gypsum, plaster of Paris, &c.....	67,549	Stone and mfrs. of.....	370,130
Iron and steel—		Sulphate of copper.....	95,049
Pigs, scraps, blooms, &c.....	2,451,416	" iron.....	2,493
Rolled, bars, plates, &c.,		Sulphur.....	436,827
including chrome steel.....	12,342,364	Sulphuric acid.....	8,558
Ferro-silicon, ferro-man-		Tufa calcareous.....	30
ganese, &c.....	462,739	Tin and manufactures of.....	3,336,948
Manufactures of, machi-		Whiting.....	44,876
nery, hardware, &c....	27,978,941	Zinc and mfrs. of.....	466,627
Kaonite.....	3,411		
Lead and mfrs. of.....	412,197	Total.....	89,389,504

PRECIOUS METALS.

GOLD AND SILVER.

The rarer metals of the platinum group, usually included as precious metals, are considered under the general heading of miscellaneous metals.

Refined Metals :—

Previous to 1904 there was no production of refined gold or silver in Canada, the metals being shipped out of the country, either as crude bullion or contained in ore matte, regulus, or other metallurgical product.

In 1904, however, the refinery of the Canadian Smelting Works at Trail, B.C., now the Consolidated Mining & Smelting Company of Canada, Ltd., was placed in operation, and the production of gold and silver bars of a fineness of .999 begun.

The annual production of refined gold and silver has been as follows :—

PRODUCTION OF REFINED GOLD AND SILVER AT TRAIL, B.C.

Calendar Year.	Gold. Fine Ounces.	Silver. Fine Ounces.
1904.....	4,336	551,450
1905.....	8,602	1,088,328
1906.....	9,992·631	1,263,809·3

The production of gold and silver contained in ore, etc., is considered below under separate headings.

GOLD.

The Department is indebted to the various provincial Mining Bureaus for much of the statistical information given in the following tables, and to the Director of the United States Mint for a statement of receipts of gold at that institution, from the Canadian Yukon.

The value of the gold output in Canada in 1906 was \$11,502,120, representing 556,464 fine ounces ; a decrease being shown from the output in 1905 of \$2,657,075, or 18·76 per cent.

The chief sources of production were the ores and placers of British Columbia and the alluvial deposits of the Yukon district, while comparatively small amounts were obtained in the other provinces. In each province or district a smaller production was made in 1906 than in 1905, the greatest falling off being from the Yukon. The gold production in Canada from 1887 to 1896 varied from a little over a million dollars to nearly three million dollars, while from 1896 to 1900, owing to the discovery and development of the Yukon district, a very rapid increase was made to \$27,908,153. Since that year, however, the output from the Yukon has steadily diminished, while the British Columbia production has slowly increased, until in 1906 the output from these two sections of the country was practically the same.

Of the total output in 1906, 40·6 per cent was derived from the Yukon district, and 48·5 per cent from British Columbia; 56·9 per cent or \$6,549,200 was obtained from placer and hydraulic workings, etc., and 43·1 per cent or \$4,952,920 from lode mining.

Tables 1 and 2 show the yearly production from 1887 to 1906, and the production by provinces in 1906.

TABLE 1.
PRECIOUS METALS.
GOLD—ANNUAL PRODUCTION IN CANADA.

Calendar Year.	*Ounces. Fine.	Value.	Calendar Year.	*Ounces. Fine.	Value
1887	57,465	\$ 1,187,804	1897	291,582	\$ 6,027,016
1888	53,150	1,098,610	1898	666,445	13,775,420
1889	62,658	1,295,159	1899	1,028,620	21,261,584
1890	55,625	1,149,776	1900	1,350,176	27,908,153
1891	45,022	930,614	1901	1,167,320	24,128,503
1892	43,909	907,601	1902	1,032,253	21,336,667
1893	47,247	976,603	1903	911,639	18,843,590
1894	54,605	1,128,688	1904	796,445	16,462,517
1895	100,806	2,083,674	1905	685,012	14,159,195
1896	133,274	2,754,774	1906	556,464	11,502,120

*Calculated from the value at the rate of \$20.67 per ounce.

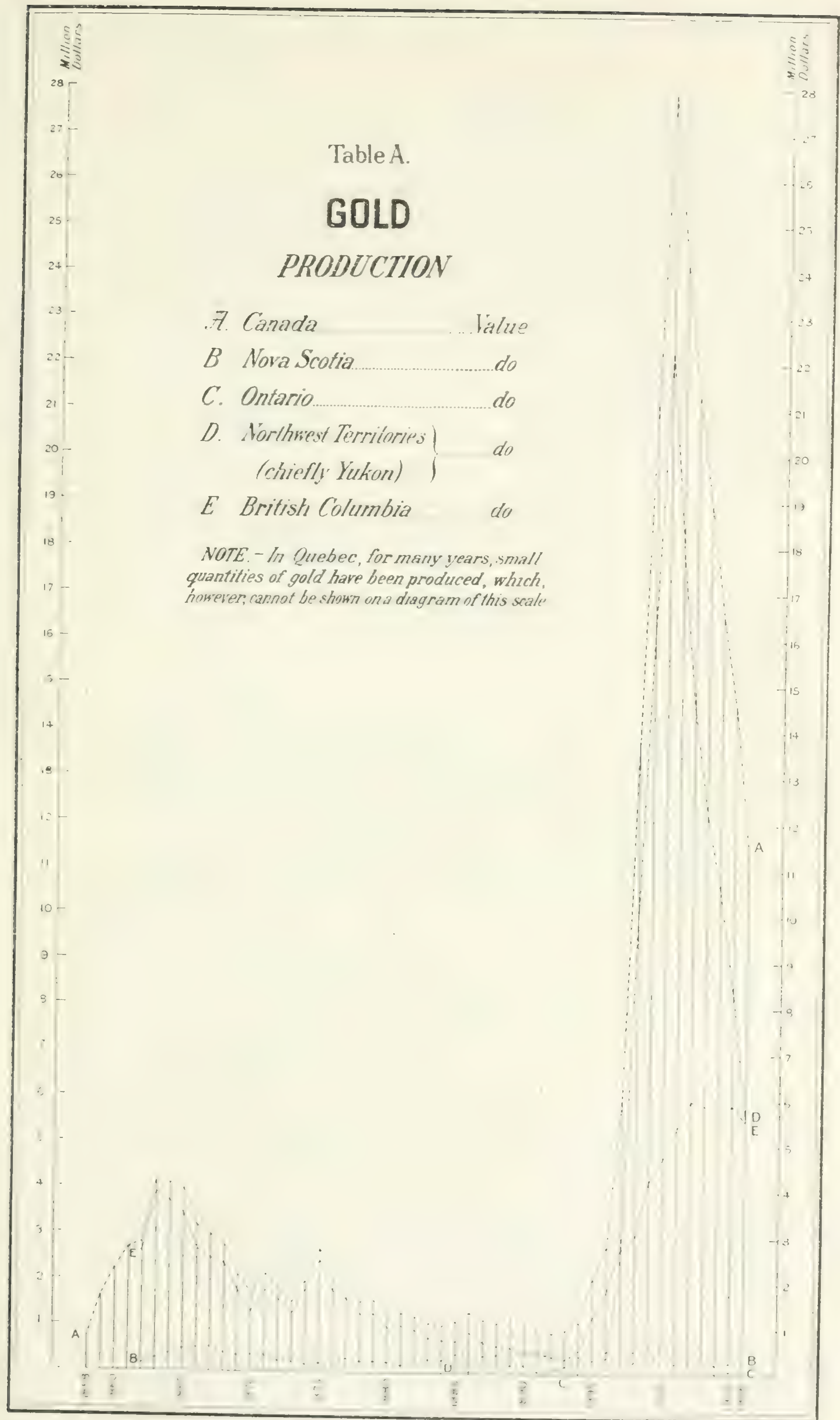


TABLE 2.

PRECIOUS METALS.

GOLD—PRODUCTION BY PROVINCES AND DISTRICTS, CALENDAR YEAR 1906.

Provinces.	Ounces Fine.	Value.
Nova Scotia.....	(b) 12,224	\$ 252,676
Quebec.....	165	3,412
Ontario.....	(b) 3,202	66,193
Alberta.....	(a) 39	800
Yukon district.....	(a) 270,924	5,600,000
British Columbia.....	(c) 269,910	5,630,639
Total.....	556,464	11,502,120

* Calculated from the value at the rate of \$20.67 per ounce.

(a) Placer gold.

(b) Gold from vein mining.

(c) As follows: Gold from placer mining.....\$ 948,400

" " vein " 4,630,639

\$ 5,579,039

Nova Scotia :—The gold output of this Province is derived almost entirely from quartz ores. In 1906, according to returns furnished by the Nova Scotia Department of Mines, there were crushed 66,059 tons of ore which yielded 13,298 ounces 14 dwts. 7 grs. of gold, valued at \$252,676, an average of 4 dwts. 0.63 grains or \$3.82 per ton. With the exception of the year 1904, when the output was valued at \$214,209, this is the smallest production recorded since 1881.

The average output during the last three years has been less than half what it was during the previous seven years, a condition which has resulted from the closing down of one or two of the most regular and largest producers.

An examination of the records of production shows that the average value of the ore treated has been steadily decreasing.

From 1862 to 1882 the average value per ton of the yearly output ranged from \$12 to over \$20; from 1882 to 1890 the average varied from \$11 to \$15 per ton. Since 1893 the average value decreased even more rapidly, falling to \$4.90 in 1905 and \$3.82 in 1906.

These figures would seem to indicate the successful and profitable treatment of the low grade ores, and this is apparently evidenced in the Boston-Richardson mine.

This mine, situated at Isaac harbour, may be cited as a typical example of a profitable low grade property. At this mine there was treated during the twelve months ending September 1906, 35,220 tons of quartz ore, from which there was extracted 4,819 ounces of gold, or over one-third of the total production of the Province for the year. A sixty stamp mill has been kept in continuous operation throughout the year, and it was proposed to largely increase this plant. As an illustration of the operation of this mine, the value of the ore and the cost of mining and operating, the following abstract, taken from the monthly statement for August 1906 furnished to the provincial Department of Mines, is given.

No. of tons crushed.....	3,939
No. of tons concentrates produced.....	8,272
Value of ore per ton (determined by assay).....\$	2 94
Value of concentrates per ton	17 00
Total value recovered.....	2 55
Cost of operation of mine per ton.....	1 08
Cost of operation of mill per ton.....	0 19
Cost of operation of cyaniding plant per ton ore.....	0 10
Cost of cyaniding concentrates, per ton concentrates.....	4 39
General maintenance of plant.....	0 53
Total cost of operation per ton.....	1 90
Average crushing per stamp per 24 hours.....	298 tons.

Statistics of gold production in Nova Scotia are given in tables 3, 4, 5, and 6 following. Table 3 shows the annual gold output ; table 4 the tons of quartz crushed and the average yield per ton ; table 5 shows the total production of each district from 1862 to the end of 1906 as well as the average yield per ton ; and table 6 shows the amount of ore crushed and its yield per district for 1906.

TABLE 3.
PRECIOUS METALS.
GOLD.—NOVA SCOTIA :—ANNUAL PRODUCTION.

Calendar Year.	Value.	Calendar Year.	Value.
1862.....	\$141,871	1885.....	\$432,971
1863.....	272,448	1886.....	455,564
1864.....	390,349	1887.....	413,631
1865.....	496,357	1888.....	436,939
1866.....	491,491	1889.....	510,029
1867.....	532,563	1890.....	474,990
1868.....	400,555	1891.....	451,503
1869.....	348,427	1892.....	389,965
1870.....	387,392	1893.....	381,095
1871.....	374,972	1894.....	389,338
1872.....	255,349	1895.....	453,119
1873.....	231,122	1896.....	493,568
1874.....	178,244	1897.....	562,165
1875.....	218,629	1898.....	538,590
1876.....	233,585	1899.....	617,604
1877.....	329,205	1900.....	598,553
1878.....	245,253	1901.....	546,963
1879.....	268,328	1902.....	627,357
1880.....	257,823	1903.....	527,806
1881.....	209,755	1904.....	214,209
1882.....	275,090	1905.....	283,353
1883.....	301,207	1906.....	252,676
1884.....	313,554		

TABLE 4.
PRECIOUS METALS.
GOLD.—NOVA SCOTIA:—ORE TREATED AND YIELD OF GOLD PER TON.

Calendar Year.	Tons Treated.	Yield of Gold per ton.	Calendar Year.	Tons Treated.	Yield of Gold per Ton.
1862.....	6,473	21.91	1885.....	28,890	14.98
1863.....	17,000	16.02	1886.....	29,010	15.70
1864.....	21,431	18.21	1887.....	32,280	12.81
1865.....	24,421	20.32	1888.....	36,178	12.08
1866.....	32,157	15.28	1889.....	39,160	13.02
1867.....	31,384	16.96	1890.....	42,749	11.11
1868.....	32,259	12.41	1891.....	36,351	12.42
1869.....	35,144	19.91	1892.....	32,552	11.98
1870.....	30,824	12.56	1893.....	42,354	8.99
1871.....	30,787	12.17	1894.....	55,357	7.04
1872.....	17,089	14.94	1895.....	60,600	7.47
1873.....	17,708	13.05	1896.....	69,169	7.13
1874.....	13,844	12.87	1897.....	73,192	7.68
1875.....	14,810	14.76	1898.....	82,747	6.50
1876.....	15,490	15.08	1899.....	112,226	5.50
1877.....	17,369	18.95	1900.....	87,390	6.85
1878.....	17,989	13.63	1901.....	91,948	5.32
1879.....	15,936	16.83	1902.....	93,842	6.68
1880.....	13,997	18.42	1903.....	103,856	5.08
1881.....	16,556	12.66	1904.....	45,436	4.71
1882.....	21,081	13.04	1905.....	57,774	4.90
1883.....	25,954	11.60	1906.....	66,659	3.82
1884.....	25,186	12.44			

TABLE 5.
PRECIOUS METALS.
GOLD.—NOVA SCOTIA:—PRODUCTION OF THE DIFFERENT DISTRICTS FROM 1862 TO 1906, INCLUSIVE.

Districts.	Tons of Crushed Ore.	Total Yield.			Value at \$19 per Oz.	Average Yield per ton of 2,000 lbs.
		Oz.	Dwt	Grs.		
Brookfield.....	98,092	43,214	2	8	\$821,068	8.37
Caribou.....	186,847	55,622	12	5	1,056,829	5.65
Central Rawdon...	13,340	10,121	11	21	192,310	14.42
Fifteenmile Stream.	42,723	18,854	0	5	358,226	8.38
Lake Catcha.....	18,877	15,358	19	18	291,820	15.45
Malaga.....	24,787	17,486	12	4	332,246	13.40
Montague.....	27,626	40,510	2	4	769,692	27.86
Oldham.....	53,969	57,699	19	15	1,096,299	20.31
Renfrew.....	52,758	45,512	4	13	864,732	16.39
Salmon River.....	104,136	34,100	11	21	647,911	6.22
Sherbrooke.....	320,425	160,416	13	13	3,047,916	9.51
Stornont.....	370,739	98,292	7	11	1,867,554	5.03
Tangier.....	40,709	23,131	2	6	439,491	10.79
Uniacke.....	64,636	44,075	18	3	837,442	12.95
Waverly.....	155,908	70,833	12	23	1,345,839	8.63
Wine Harbour.....	73,019	40,659	12	3	772,532	10.57
Other Districts	140,339	86,681	8	17	1,646,947	11.73
Totals	1,788,930	862,571	11	22	16,388,854	9.16

TABLE 6.
PRECIOUS METALS.
GOLD.—NOVA SCOTIA :—DISTRICT DETAILS, CALENDAR YEAR, 1906.

Districts.	Mines	Mills.	Tons of Ore Crushed.	Total Yield of Gold.			Average Yield of Gold per Ton.		
				Oz.	Dwt	Grs.	Oz.	Dwt.	Grs.
Caribou.....	4	4	10,477	836	6	22	..	1	14 31
Ecum Secum....	1	1	156	135	9	0	..	17	8 77
Fifteenmile Stream..	1	1	240	54	0	0	..	4	12 00
Gold River.....	1	2	117	256	12	0	2	3	20 72
Harrigan Cove.....	1	1	903	253	10	0	..	5	14 75
Lake Catcha.....	1	1	264	283	0	0	1	1	11 27
Lawrencetown....	1	1	225	42	5	0	..	3	18 13
Leipsigate	1	1	2,297	788	12	0	..	6	20 79
Montague.....	1	1	97	26	11	0	..	5	11 38
Oldham.....	2	1	972	960	10	18	..	19	18 34
Quaddy.....	1	1	30	1	0	0	..	..	16 00
Renfrew.....	1	1	306	72	5	0	..	4	17 33
Upper Stewiacke ...	1	1	40	18	8	0	..	9	4 80
Sherbrooke.....	2	2	2,268	575	7	0	..	5	1 77
Stormont.....	4	4	43,465	6,734	11	11	..	3	2 37
Tangier	2	2	32	6	5	0	..	3	21 75
Uniacke.....	1	1	141	310	0	0	2	3	23 32
Wagamatkeek....	1	1	8	3	17	12	..	9	16 50
Whiteburn	1	1	76	42	6	0	..	11	3 16
Wine Harbour....	2	2	3,163	861	5	0	..	5	10 69
Mortared.....	..	..	(50 lbs.)	4	11	5	182	8	8 00
Stibnite ore.....	1	..	782	1,031	13	11	1	6	9 25
Total.....	31	30	66,059	13,298	14	7	..	4	0 63

Quebec :—The small production of gold credited to this Province during the past four years is almost altogether represented by the gold contents of the pyritous ores mined near Sherbrooke in the Eastern townships. A small amount of prospecting is regularly done upon the alluvial deposits of the St. Francis, Chaudière and Gilbert rivers ; but very little output has been derived from this source for the past few years.

TABLE 7.
PRECIOUS METALS.
GOLD.—QUEBEC :—ANNUAL PRODUCTION.

Calendar Year.	Value.	Calendar Year.	Value
1877.....	\$ 12,057	1892.. ..	\$12,987
1878.....	17,937	1893.....	15,696
1879.....	23,972	1894.....	29,196
1880.....	33,174	1895.....	1,281
1881.....	56,661	1896.....	3,000
1882.....	17,093	1897.....	900
1883.....	17,787	1898.....	6,089
1884.....	8,720	1899.. ..	4,916
1885.....	2,120	1900.. ..	Nil.
1886	3,981	1901.....	3,000
1887.....	1,604	1902.....	8,073
1888.. ..	3,740	1903.....	3,712
1889.....	1,207	1904.....	2,900
1890.. ..	1,350	1905.. ..	3,940
1891.. ..	1,800	1906.....	3,412

SESSIONAL PAPER No. 26b

Ontario :—“ The gold mines of the Province were for the most part idle and unproductive during 1906. According to the returns made to the Bureau, some 3,926 ounces of bullion were obtained from the following properties : St. Anthony Reef, Laurentian, Sultana, Shakespeare, Olympia, Rush Bay, Golden Horn and Graig ; a small amount was also recovered from the Bessemer mattes made from the nickel-copper ores raised by the Canadian Copper Company. The total value of the gold production was \$66,193, a somewhat smaller yield than that for the year previous.

Gold was found in 1906 on the shores of Larder lake, which lies some distance north-east of Lake Timiskaming and near the Quebec boundary line, and the many prospectors who were attracted by reports of the discoveries staked out a large number of claims, mostly during the winter of 1906-07.” (1).

A short visit was paid to the Larder Lake district by Mr. R. W. Brock in 1907 for the Ontario Bureau of Mines, and a preliminary report published in the Sixteenth Annual Report of the Bureau pages 202-218. There has as yet been no gold produced for this district.

TABLE 8.

PRECIOUS METALS.

GOLD.—ONTARIO : —ANNUAL PRODUCTION.

Calendar Year.	*Ounces. Fine.	Value.
1887	327	\$ 6,760
1888		
1889		
1890		
1891	97	2,000
1892	344	7,118
1893	708	14,637
1894	1,917	39,624
1895	3,015	62,320
1896	5,563	115,000
1897	9,158	189,294
1898	12,864	265,889
1899	20,395	421,591
1900	14,392	297,495
1901	11,845	244,837
1902	11,119	229,828
1903	9,097	188,036
1904	1,935	40,000
1905	4,403	91,000
1906	3,202	66,193

* Calculated from the value of \$20.67 per ounce.

(1) Sixteenth Annual Report of the Ontario Bureau of Mines, Part I, page 6.

Alberta :—About \$800 worth of gold, derived from the placer deposits of the Saskatchewan river, was purchased by the banks at Edmonton during 1906. This is the only record of production from that district during the year.

Statistics of the production of gold from the Saskatchewan river since 1887 are shown in the following table :—

TABLE 9.
PRECIOUS METALS.
GOLD.—ALBERTA :—ANNUAL PRODUCTION.

Calendar Year.	*Ounces. Fine.	Value.
		\$
1887.....	102	2,100
1888.....	58	1,200
1889.....	968	20,000
1890.....	194	4,000
1891.....	266	5,500
1892.....	508	10,506
1893.....	466	9,640
1894.....	725	15,000
1895.....	2,419	50,000
1896.....	2,661	55,000
1897.....	2,419	50,000
1898.....	1,209	25,000
1899.....	726	15,000
1900.....	242	5,000
1901.....	726	15,000
1902.....	484	10,000
1903.....	48	1,000
1904.....	24	500
1905.....	121	2,500
1906.....	39	800

* Calculated from the value at the rate of \$20.67 per ounce.

Yukon District or Klondike :—The production of the Yukon district in 1906 is estimated at about \$5,600,000, representing 270,924 fine ounces of gold. The production in 1905 was stated in a report for that year to have been \$6,327,200. This figure represented a preliminary estimate of the receipts of United States receiving offices of gold from the Canadian Yukon. It was discovered, however, that about 24,996 crude ounces of gold dust coming from the mines of Alaska were purchased in Dawson during 1905 and wrongly credited to the Canadian Yukon. Revised figures place the receipts of Canadian Yukon gold and silver in United States receiving offices during 1905 as :—

	Standard Ounces.	Value.
Gold	123,438.463	\$7,875,955.41
Silver.....	99,588.74	56,765.58

SESSIONAL PAPER No. 26b

or a total output of the precious metals from the Canadian Yukon in 1905 of \$7,932,720. (1)

We are indebted to the Director of the United States Mint at Washington for a statement of the amount of gold and silver deposited at the United States receiving office in 1906, as follows :—

	Fine ounces.	Value.
Gold.....	270,771·963	\$5,596,856
Silver	63,665·49	42,522
		<u>\$ 45,639,378</u>

The total value of the production of the precious metals in 1906, according to this authority, would be, therefore, \$5,639,378.

This statement is qualified, however, by the explanation that it may possibly include some gold from United States territory in Alaska, wrongly credited to the Canadian Yukon, or gold from Canadian sources other than the Yukon.

A royalty of $2\frac{1}{2}$ p.c. is collected by the Dominion Government on the gold output from the Yukon, and on the basis of this tax the following is a statement of the monthly production of gold during 1906, as furnished by the Interior Department :—

Production of gold in the Canadian Yukon Territory, based on the amount of royalty collected during the year ending Dec. 31.

1906.	Gross Weight. Ounces.
January.....	3,732·91
February.....	11,693·99
March.....	10·30
April.....	784·77
May.....	64,060·66
June.....	57,578·27
July.....	49,012·36
August.....	54,947·07
September.....	53,487·08
October.....	51,799·53
November.....	131·81
December.....	3,352·83
Total	<u>350,591·61</u>

(1) Report of the Director of the U.S. Mint for 1905, pages 44 and 45.

The crude gold is for the purpose of collecting the royalty valued at \$15 per ounce, which would place the value of the production at \$5,258,874. The grade (1) of gold found on the different creeks and along different positions of the same creek varies greatly. The lowest grade of gold found in the camp has a value of about \$12.50 per ounce, while assays of \$17.75 have been reported. It is exceedingly difficult to strike an average, but it is generally conceded that the average would exceed \$15 per ounce. At \$16 per ounce the value of the production in 1906 of 350,591.61 ounces would be \$5,609,465. At \$16.50 per ounce, which value experience has shown to be the average of Klondike gold received at United States mints and assay offices, the total value of the production would be \$5,784,761.

Owing to the fact thus evidenced that it is difficult to obtain exact information regarding the value of the output, the figures of production in the accompanying table are given in round numbers. The statistics, however, in the main, are primarily based on the receipts of gold from the Canadian Yukon in the receiving offices of the United States Mint.

TABLE 10.
PRECIOUS METALS.
GOLD. — YUKON DISTRICT : — ANNUAL PRODUCTION.

Calendar Year.	Ounces Fine.	Value.	Calendar Year.	Ounces Fine.	Value.
		\$			\$
1885	4,838	100,000	1897	120,948	2,500,000
1886	3,387	70,000	1898	483,793	10,000,000
1887	1,935	40,000	1899	774,069	16,000,000
1888	8,466	175,000	1900	1,077,640	22,275,000
1889	8,466	175,000	1901	870,827	18,000,000
1890	1,935	40,000	1902	701,500	14,500,000
1891	4,233	87,500	1903	592,646	12,250,000
1892	8,515	176,000	1904	507,983	10,500,000
1893	6,047	125,000	1905	381,035	7,876,000
1894	12,095	250,000	1906	270,924	5,600,000
1895	14,514	300,000	Total 1885 to 1906		121,039,500

The following statement of gold production of the Yukon, royalty paid, etc., is taken from the report of the Mines Branch of the Department of the Interior.

(1) Report of the gold values in the Klondike High Level Gravels — R. G. McConnell, Geological Survey, p. 12.

SESSIONAL PAPER No. 26b

Fiscal Year.	Total Gold Production.	Total Exemption.	Royalty Collected on.	Royalty Paid.
	\$	\$	\$	\$
1898.....	3,072,773	339,845	2,732,928	273,292
1899.....	7,582,283	1,699,657	5,882,626	588,262
1900.....	9,809,464	2,501,744	7,307,720	730,771
1901.....	9,162,082	1,927,666	7,236,522	592,660
1902.....	9,566,340	1,199,114	8,367,225	331,436
1903.....	12,113,015	.....	12,113,015	302,893
1904.....	10,790,663	.....	10,790,663	272,217
1905.....	8,222,054	.....	8,222,054	206,760
1906.....	6,540,007	.....	6,540,007	163,963

British Columbia :—The value of the output of gold in British Columbia in 1906 was \$5,579,039, as compared with \$5,902,402 in 1905, a decrease of \$323,363 or 5.47 per cent. Of the output in 1906 \$948,400 was derived from placer workings, dredging, hydraulicing, etc., and \$4,630,639 from lode mines.

The Provincial Mineralogist in his report to the Minister of Mines for the Province gives the special features of the gold production during the year as follows :—

“ Placer Gold—The production of placer gold during the year 1906 was about \$948,400, which is about 2.2 per cent less than that of 1905. This falling off, though slight, is general, and represents the lessened work of the individual miner, whose successors, the large companies, have not as yet got into satisfactory operation.

The Atlin district produced very nearly as much gold as it did the previous year, chiefly the work of comparatively small companies, although in this district individual miners are still at work ; but the ground suited for this class of mining is gradually diminishing.

The two large dredges installed in this district have been practically abandoned, as the ground upon which they were working was found unsuitable for dredging operations.

A large steam shovel plant has been installed on shallow ground, and from present indications promises to be a large producer. The small shovel, the first installed in the district, has not been a commercial success, owing to the quite inadequate arrangements for handling and washing the dirt lifted.

In the Dease Lake section of Cassiar, despite the difficulties of transportation, one hydraulic company recovered between \$20,000 and \$25,000 in gold, and a second company will probably be in operation in 1907. Here, however, the individual miner has almost disappeared.

In the Cariboo district, the Cariboo mining division shows a marked increase over the preceding year, about 18·9 per cent, chiefly from small hydraulic enterprises; but the Quesnel division shows a decrease of about 30 per cent, due to the fact that the largest producing company did little mining, being taken up with large operations for increasing its water supply.

The Fort Steele district continues to produce a little gold from the old creeks, but the quantity is yearly diminishing.

The bars on the Thompson and Fraser rivers have been very disappointing, and the dredges installed thereon have not been successful.

Gold from Lode Mining—The value of the gold produced from lode mining in the Province in 1906 was \$4,630,639, of which about 95 per cent was recovered from the smelting of copper-bearing ores. There are practically no stamps in operation since the Ymir mine ceased to operate, excepting one at Hedley.”

TABLE 11.
PRECIOUS METALS.
GOLD.—BRITISH COLUMBIA :—ANNUAL PRODUCTION.

Calendar Year.	Value.	Calendar Year.	Value.
1858.....	\$ 705,000	1883.....	\$ 794,252
1859.....	1,615,072	1884.....	736,165
1860.....	2,228,543	1885.....	713,738
1861.....	2,666,118	1886.....	903,651
1862.....	2,656,903	1887.....	693,709
1863.....	3,913,563	1888.....	616,731
1864.....	3,735,850	1889.....	588,923
1865.....	3,491,205	1890.....	494,436
1866.....	2,662,106	1891.....	429,811
1867.....	2,480,868	1892.....	399,525
1868.....	2,372,972	1893.....	379,535
1869.....	1,774,978	1894.....	530,530
1870.....	1,336,956	1895.....	1,266,954
1871.....	1,799,440	1896.....	1,788,206
1872.....	1,610,972	1897.....	2,724,657
1873.....	1,305,749	1898.....	2,939,852
1874.....	1,844,618	1899.....	4,202,473
1875.....	2,474,904	1900.....	4,732,105
1876.....	1,786,648	1901.....	5,318,703
1877.....	1,608,182	1902.....	5,961,409
1878.....	1,275,204	1903.....	5,873,036
1879.....	1,290,058	1904.....	5,704,908
1880.....	1,013,827	1905.....	5,902,402
1881.....	1,046,737	1906.....	5,579,039
1882.....	954,085		

TABLE 12.
PRECIOUS METALS.

GOLD.—BRITISH COLUMBIA :—PRODUCTION BY DISTRICTS—1906.

Districts.	Gold, Placer.		Gold, Lode.	
	Ounces.	Value.	Ounces.	Value.
		\$		\$
Cariboo—				
Cariboo division.....	17,790	355,800		
Quesnel ".....	1,980	39,600		
Omineca ".....	500	10,000		
Cassiar—				
Atlin Lake division.....	22,750	455,000		
All other divisions.....	2,200	44,000	2	41
East Kootenay—				
Fort Steele division... ..	520	10,400		
Other divisions.....			10	207
West Kootenay—				
Ainsworth division.....			19	393
Nelson ".....	50	1,000	11,677	241,364
Slocan and Slocan City.....			69	1,426
Trail Creek.....			105,356	2,177,709
All other divisions.. ..	200	4,000	2,048	42,332
Lillooet.....	840	16,800	170	3,514
Yale—				
Grand Forks, etc.....	165	3,300	94,125	1,945,564
Similkameen, etc.....	125	2,500	6	124
Yale, etc.....	250	5,000	215	4,444
Coast and other divisions...	50	1,000	10,330	213,521
Totals.....	47,420	948,400	224,027	4,630,639

The following tables show the production of the Rossland mines, and illustrate the average results attained during the past thirteen years.

NET PRODUCTION PER SMELTER RETURNS.

Year.	Ore, tons, 2,000 lb.	Gold, ozs.	Silver, ozs.	Copper, lb.	Value.
1894.....	1,856	3,723	5,357	106,229	\$ 75,510
1895.....	19,693	31,497	46,702	840,420	702,459
1896.....	38,075	55,275	89,285	1,580,635	1,243,360
1897.....	68,804	97,024	110,068	1,819,586	2,097,280
1898.....	111,282	87,343	170,804	5,232,011	2,470,811
1899.....	172,665	102,976	185,818	5,693,889	3,229,086
1900.....	217,636	111,625	167,378	2,071,865	2,739,300
1901.....	283,360	132,333	970,460	8,333,446	4,621,299
1902.....	329,534	162,146	373,101	11,667,807	4,893,395
1903.....	360,786	145,353	209,537	8,652,127	4,255,958
1904.....	312,991	133,095	181,830	7,119,876	3,760,866
1905.....	330,618	129,843	147,753	5,800,294	3,672,828
1906.. ..	279,527	105,356	126,174	4,750,110	3,173,587

AVERAGE NET SMELTER RETURNS, OR ACTUAL YIELD PER TON.

Year.	Gold.	Silver.	Copper.	Value.
	Ounces.	Ounces.	Per cent.	¢cts.
1894.....	2·00	2·89	2·85	40·69
1895... ..	1·60	2·41	2·10	35·67
1896... ..	1·45	2·34	2·08	32·65
1897... ..	1·42	1·60	1·32	30·48
1898... ..	·78	1·54	2·35	22·10
1899... ..	·596	1·07	1·65	18·70
1900... ..	·513	·769	·476	12·58
1901... ..	·467	3·424	1·470	16·31
1902... ..	·492	1·132	1·770	14·85
1903... ..	403	·581	1·199	11·80
1904... ..	·425	·581	1·137	12·01
1905... ..	·393	·447	·877	11·11
1906... ..	·377	·451	·850	11·35

SILVER.

The production and shipment of the remarkably rich silver ores from the Cobalt district has resulted in a large increase in Canada's silver production. The total shipments in 1906 were about 8,473,379 ounces, contained in ore, matte, or other form, which, valued at 66·791 cents per ounce, the average price of silver for the year in the New York market, represented a total ultimate value of \$5,659,455. Compared with 1905 this is an increase in quantity of 2,483,712 ounces or 41·466 per cent. The average price of silver during the year was greater than in 1905, by 6·439 cents or 10·6 per cent.

The price of silver varied considerably during the year, the lowest average monthly price according to quotations published by the Engineering and Mining Journal, of New York, being 64·597 cents per ounce in March, and the highest 70·813 cents in November. The average monthly prices were as follows:—

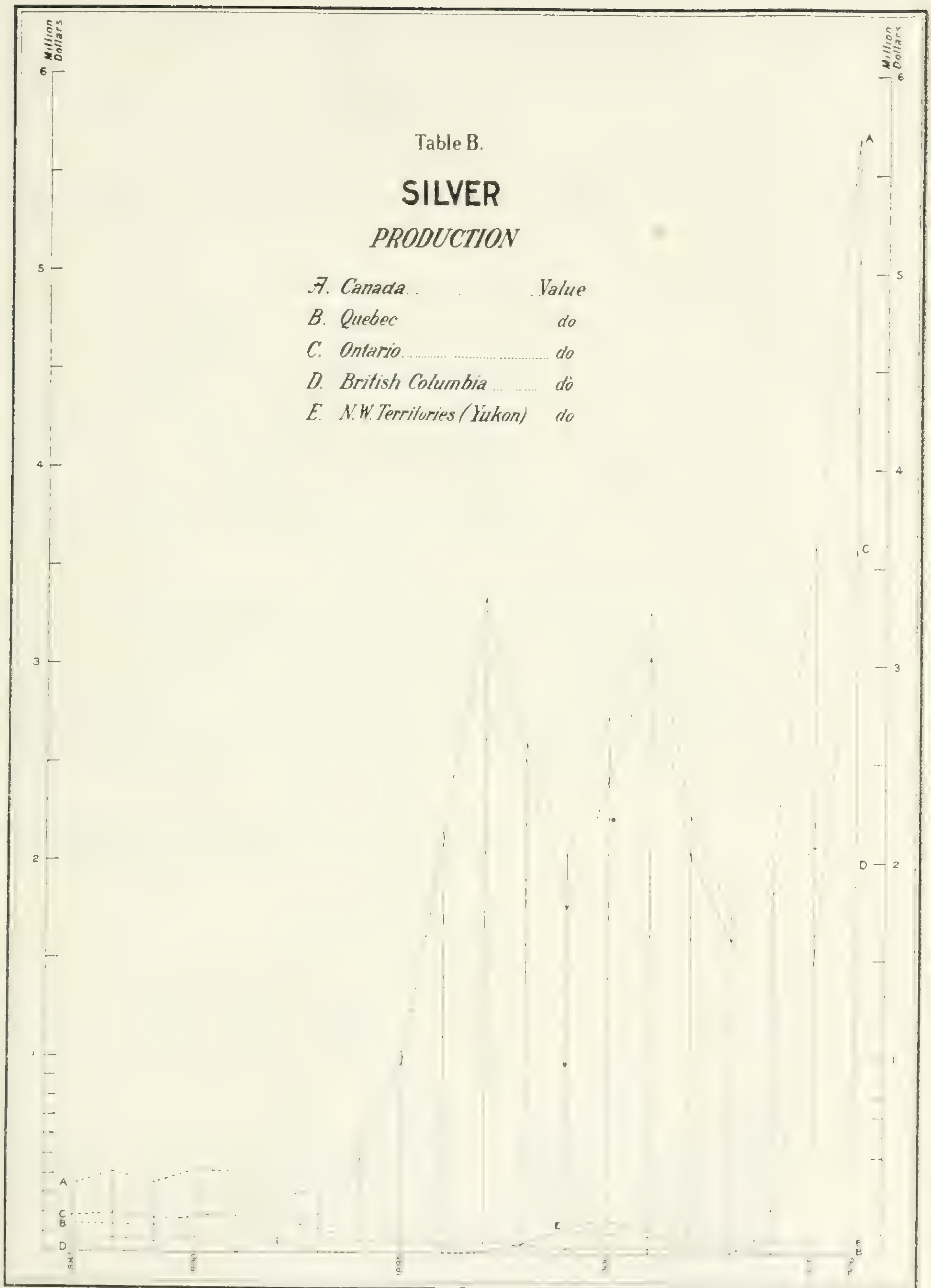
AVERAGE MONTHLY PRICE OF SILVER DURING 1906.

Month.	Price.	Month.	Price.
	Cents.		Cents.
January... ..	65·288	July.....	65·105
February... ..	66·108	August... ..	65·949
March... ..	64·597	September... ..	67·927
April... ..	64·765	October... ..	69·523
May.....	66·976	November.....	70·813
June.....	65·394	December... ..	69·050
Average for the Year		66·791	

Table B.

SILVER PRODUCTION

<i>A. Canada</i>	<i>Value</i>
<i>B. Quebec</i>	<i>do</i>
<i>C. Ontario</i>	<i>do</i>
<i>D. British Columbia</i>	<i>do</i>
<i>E. N.W. Territories (Yukon)</i>	<i>do</i>



SESSIONAL PAPER No. 26b

Of the total production in 1906 about 63·7 per cent was derived from the Cobalt district of Ontario ; 33·5 per cent from the various silver ores of British Columbia ; the balance representing the silver contained in the pyrites ores of Quebec, and the silver carried by the placer gold obtained from the Yukon.

Quebec :—The output from the Province of Quebec, as usual, is represented by the small amount contained in the pyrites ore mined in the vicinity of Capelton in the Eastern townships.

Ontario :—Although spasmodic attempts have been made in recent years to work the silver ores of the Silver Mountain district near Port Arthur, the main silver production of this Province is now obtained from the Cobalt District ores. From a beginning in 1904 of shipments aggregating somewhat over 150 tons, carrying 206,875 ounces of silver the production had increased in 1906 to shipments of 5,335 tons carrying 5,401,766 ounces of silver, and in addition the ores carry important values in cobalt and arsenic, although the mine owners have received payment for but a small proportion of the latter.

Ontario thus once more takes first place as a silver producer, formerly held at the time of the operation of the Silver Islet mines on Lake Superior. Since 1894, the argentiferous lead ores of British Columbia have been responsible for the greater part of the silver output in Canada, contributing over ninety per cent of the total until 1904. In 1905, however, British Columbia's proportion was reduced to 57 per cent, and Ontario's increased to 41 per cent.

Statistics of the production of silver are shown in table 13, while the details by provinces are given in table 14.

TABLE 13.
PRECIOUS METALS.
SILVER.—ANNUAL PRODUCTION.

Year.	Ounces.	Value.	Average price per ounce.	Year.	Ounces.	Value.	Average price per ounce.
		\$	cts.			\$	cts.
1887....	355,083	347,271	98 0	1897....	5,558,446	3,323,395	59·79
1888....	437,232	410,998	94 0	1898....	4,452,333	2,593,929	58·26
1889....	383,318	358,785	93·6	1899....	3,411,644	2,032,658	59·58
1890....	400,687	419,118	104·6	1900....	4,468,225	2,740,362	61·33
1891....	414,523	409,549	98·0	1901....	5,539,192	3,265,354	58·95
1892....	310,651	272,130	86·0	1902....	4,291,317	2,238,351	52·16
1893....		330,128	77·0	1903....	3,198,581	1,709,642	53·45
1894....	847,697	534,049	63·0	1904....	3,577,526	2,047,095	57·22
1895....	1,578,275	1,030,299	65·28	1905....	5,989,667	3,614,883	60·35
1896....	3,205,343	2,149,503	67·06	1906....	8,473,379	5,659,455	66·79

TABLE 14.
PRECIOUS METALS.
SILVER.—PRODUCTION BY PROVINCES.

Calendar Year.	ONTARIO.		QUEBEC.		BRITISH COLUMBIA.		YUKON TERRITORY.	
	Ounces.	Value.	Ounces.	Value.	Ounces.	Value.	Ounces.	Value.
		\$		\$		\$		\$
1887..	190,495	186,304	146,898	143,666	17,690	17,301		
1888..	208,064	195,580	149,388	140,425	79,780	74,993		
1889..	181,609	169,986	148,517	139,012	53,192	49,787		
1890..	158,715	166,016	171,545	179,436	70,427	73,666		
1891..	225,633	222,926	185,584	183,357	3,306	3,266		
1892..	41,581	36,425	191,910	168,113	77,160	67,592		
1893..		8,689		126,439		195,000		
1894..			101,318	63,830	746,379	470,219		
1895..			81,753	53,369	1,496,522	976,930		
1896..			70,000	46,942	3,135,343	2,102,561		
1897..	5,000	2,990	80,475	48,116	5,472,971	3,272,289		
1898..	85,000	49,521	74,932	43,655	4,292,401	2,500,753		
1899..	202,000	120,352	40,231	23,970	2,939,413	1,751,302	230,000	137,034
1900..	161,650	99,140	58,400	35,817	3,958,175	2,427,548	290,000	177,857
1901..	151,400	89,250	41,459	24,440	5,151,333	3,036,711	195,000	114,953
1902..	145,000	75,632	42,500	22,168	3,917,917	2,043,586	185,900	96,965
1903..	17,777	9,502	28,600	15,287	2,996,204	1,601,471	156,000	83,382
1904..	206,875	118,376	15,000	8,583	3,222,481	1,843,935	133,170	76,201
1905..	2,441,000	1,473,192	19,620	11,841	3,439,417	2,075,757	89,630	54,093
1906..	5,401,766	3,607,894	17,686	11,813	2,990,262	1,997,226	63,665	42,522

British Columbia :—The production by districts in British Columbia is shown in the following table :—

TABLE 15.
PRECIOUS METALS.
SILVER.—BRITISH COLUMBIA :—PRODUCTION BY DISTRICTS.

District.	1903.	1904.	1905.	1906.
	Ounces.	Ounces.	Ounces.	Ounces.
Cassiar.....	53	185	477	26
Kootenay East—				
Fort Steele division.....	28,537	590,186	1,137,872	1,049,536
Other divisions.....	59,006	20,964	16,880	22,174
Kootenay West—				
Ainsworth division.....	108,678	90,004	99,781	165,915
Nelson.....	190,003	198,795	116,729	211,122
Slocan.....	1,466,931	1,540,170	1,045,948	571,613
Trail Creek.....	209,537	181,830	147,753	126,174
Other divisions.....	392,354	148,201	121,551	79,262
Lillooet.....	12			
Yale—				
Osoyoos division.....	320,749	245,155	630,407	671,661
Yale.....	15	625	3,863	1,034
Coast and other districts.....	220,329	206,366	118,156	91,745
Totals.....	2,996,204	3,222,481	3,439,417	2,990,262

SESSIONAL PAPER No. 26b

Compared with 1905 a decrease of 449,155 ounces or 13 per cent is shown. About 77 per cent of the silver is found in association with lead in argentiferous galena, the remainder being found in conjunction with copper ores.

Yukon :—The figures of silver production in the Yukon given in table 14 represent the silver found alloyed with the placer gold obtained from that district, there having been as yet no record of production of silver ores from the Windy Arm deposits.

EXPORTS :—The following table shows the value of the silver in ore matte or other form exported from Canada since 1886.

TABLE 16.
PRECIOUS METALS.
SILVER.—EXPORTS OF ORE.

Calendar Year.	Value.	Calendar Year.	Value.
1886.....	\$ 25,957	1897.....	\$ 3,576,391
1887.....	206,284	1898.....	2,902,277
1888.....	219,008	1899.....	1,623,905
1889.....	212,163	1900.....	2,341,872
1890.. ..	204,142	1901.....	2,026,727
1891.....	225,312	1902.....	1,820,058
1892.....	56,688	1903.....	1,989,474
1893.....	213,695	1904.....	1,904,394
1894.....	359,731	1905....	2,777,218
1895.....	994,354	1906.....	5,686,444
1896.....	2,271,959		

COPPER.

The total production of copper in Canada in 1906 was 55,609,888 pounds, or by provinces as follows :—

Quebec.....	1,981,169	pounds.
Ontario	10,638,231	"
British Columbia.....	42,990,488	"
Total....	55,609,888	"

This output shows a substantial increase of 15·6 per cent over the production in 1905, the increase being general throughout most of the copper producing districts.

Many of the ores from which copper is obtained in Canada contain considerable values in other constituents, in fact in many cases the copper may be considered as of secondary importance.

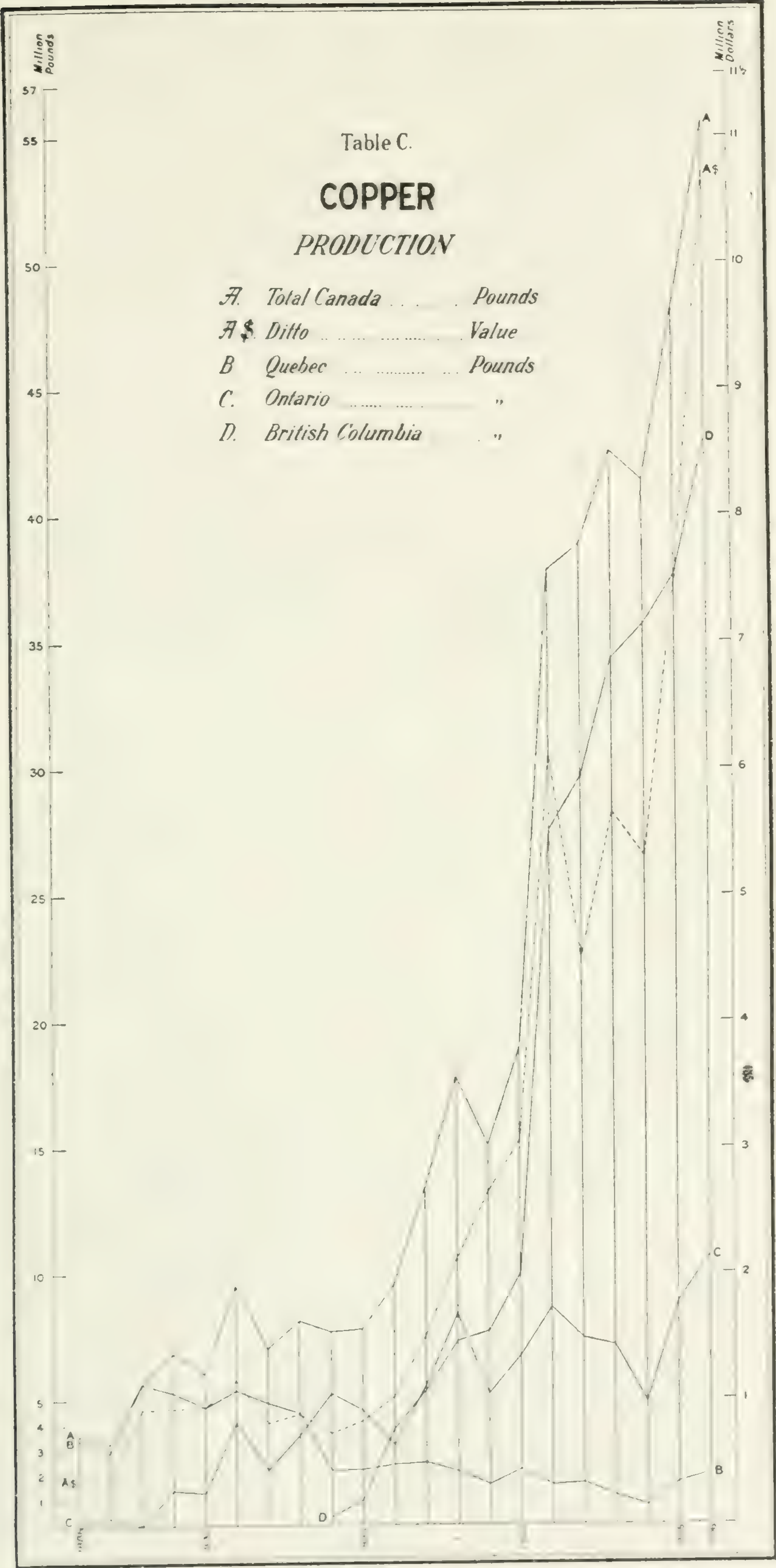
In Quebec the copper is derived from the pyrite deposits near Sherbrooke, which are primarily mined for the manufacture of sulphuric acid ; but which contain also, in addition to the copper, slight values in gold and silver. The production in Ontario is still practically represented by the copper contents of the nickel-copper ores of the Sudbury district, which contain also values in gold, silver, cobalt, and the platinum group of metals, although a small production is now obtained from a class of ores yielding copper only.

In British Columbia much the greater part of the output is now derived from the low grade sulphide ores of the Boundary district, the values of which in gold and silver would enable them to be worked at a profit, it is believed, even should the price of copper fall much below its present high level.

*Prices :—*The total value of the production in 1906, at the final average monthly price of the metal in New York according to the quotation published in the Engineering and Mining Journal, was \$10,720,474, as compared with a total value in 1905 of \$7,497,660, an increase of over 43 per cent. The average monthly price of the metal in 1906 was 19·278 cents per pound, compared with an average of 15·590 cents during the previous year, or an increase of over 23 per cent.

The average monthly prices of copper in New York were as follows :—

	Cents per lb.
January.....	18·310
February.....	17·869
March.....	18·361
April.....	18·375
May.....	18·475
June.....	18·442
July.....	18·190
August.....	18·380
September.....	19·033
October.....	21·203
November.....	21·833
December.....	22·885
Average for the year.....	19·278



Statistics of production, exports, and imports are given in the following tables :—

TABLE 1.
COPPER.
ANNUAL PRODUCTION.*

Calendar Year.	Lb.	Increase or Decrease.		Value.	Increase or Decrease.		Average Price per Pound.
		Lbs.	%		\$	%	
1886.....	3,505,000	.....	.....	\$ 385,550	.....	.....	Cts. 11·00
1887.....	3,260,424	244,576	6·99	366,798	18,752	4·86	11·25
1888.....	5,562,864	2,302,440	70·60	927,107	560,309	152·70	16·66
1889.....	6,809,752	1,246,888	22·40	936,341	9,234	0·99	13·75
1890.....	6,013,671	796,081	11·69	947,153	10,812	1·15	15·75
1891.....	9,529,401	3,515,730	58·46	1,226,703	279,550	29·51	12·87
1892.....	7,087,275	2,442,126	25·63	818,580	408,123	53·27	11·55
1893.....	8,109,856	1,022,381	14·40	871,809	53,229	6·50	10·75
1894.....	7,708,789	401,067	4·94	736,960	134,849	15·46	9·56
1895.....	7,771,639	62,850	·81	836,228	99,268	13·47	10·76
1896.....	9,393,012	1,621,373	20·86	1,021,960	185,732	22·21	10·88
1897.....	13,300,802	3,907,790	41·60	1,501,660	479,700	46·94	11·29
1898.....	17,747,136	4,446,334	33·43	2,134,980	633,320	42·17	12·03
1899.....	15,078,475	2,668,661	15·04	2,655,319	520,339	24·37	17·61
1900.....	18,937,138	3,858,663	25·59	3,065,922	410,603	15·46	16·19
1901.....	37,827,019	18,889,881	99·75	6,096,581	3,030,659	98·84	16·117
1902.....	38,804,259	977,240	2·58	4,511,383	1,585,198	26·00	11·626
1903.....	42,684,454	3,880,195	10·00	5,649,487	1,138,104	25·23	13·235
1904.....	41,383,722	1,300,732	3·05	5,306,635	342,852	6·07	12·823
1905.....	48,092,753	6,709,031	16·21	7,497,660	2,191,025	41·29	15·590
1906.....	55,609,888	7,517,135	15·63	10,720,474	3,222,814	42·98	19·278

* The production is altogether represented by the copper contained in ore, matte, etc., produced and shipped, valued at the average market price for the year for fine copper in New York.

NOTE.—In the above table, increases are shown underlined, and decreases in the ordinary way.

TABLE 4.

COPPER.

IMPORTS OF MANUFACTURES.

Fiscal Year.		Value.		
		\$		
1880		123,061		
1881		159,163		
1882		220,235		
1883		247,141		
1884		134,534		
1885		181,469		
1886		219,420		
1887		325,365		
1888		303,459		
1889		402,216		
1890		472,668		
1891		563,522		
1892		422,870		
1893		458,715		
1894		175,404		
1895		251,615		
1896		285,220		
1897		264,587		
1898		786,529		
1899		551,586		
1900		1,090,280		
1901		951,045		
1902		1,281,522		
1903		1,291,635		
1904		1,191,610		
1905		1,775,881		
1906.	Copper in bolts, bars and rods, in coils, or otherwise in lengths not less than 6 feet, unmanufactured	Duty. Free.	Pounds. 11,227,600	\$ 1,922,071
	Copper, in strips, sheets or plates, not planished or coated, etc.	"	2,547,200	519,808
	Copper tubing in lengths not less than 6 feet, and not polished, bent or otherwise manufactured	"	262,761	69,319
	Copper rollers, for use in calico printing, imported by calico printers for use in their own factories	"		6,697
	Copper and manufactures of :—			
	Nails, tacks, rivets and burrs or washers..	30 p. c.		3,460
	Wire, plain, tinned or plated.....	15 "	216,517	40,095
	Wire cloth, etc.....	25 "		3,303
	All other manufactures of, N.O.P.....	30 "		95,550
	Total			2,660,303

Quebec :—As usual the copper production in Quebec was derived chiefly from pyrites ores of the Eastern townships, which are mined primarily for the manufacture of sulphuric acid.

Statistics showing the copper contained in the ore shipped are given in table 5 following :—

TABLE 5.

COPPER.

QUEBEC :—PRODUCTION.

Calendar Year.	Pounds.	Value.
		\$
1886.....	3,340,000	367,400
1887... ..	2,937,900	330,514
1888.....	5,562,864	927,107
1889... ..	5,315,000	730,813
1890.....	4,710,606	741,920
1891... ..	5,401,704	695,469
1892.....	4,833,480	561,042
1893.....	4,468,352	480,348
1894.....	2,176,430	208,067
1895.....	2,242,462	241,288
1896.....	2,407,200	261,903
1897.....	2,474,970	279,424
1898.....	2,100,235	252,658
1899.....	1,632,560	287,494
1900.....	2,220,000	359,418
1901.....	1,527,442	246,178
1902... ..	1,640,000	190,666
1903.....	1,152,000	152,467
1904... ..	760,000	97,455
1905.....	1,621,243	252,752
1906.....	1,981,169	381,930

Ontario :—While the greater part of the copper production of this Province is derived from the nickel-copper ores of the Sudbury district, there was considerable activity during the year in the development of copper properties ; but, although some 18,000 tons of ore were mined from these, only a small quantity was shipped.

The total quantity of nickel-copper ore mined during the year was 343,814 tons ; while 340,059 tons were smelted, producing 20,346 tons

SESSIONAL PAPER No. 26b

of Bessemer matte. The quantity of matte shipped during the year was 20,310 tons, containing 5,264 tons of copper and 10,745 tons of nickel, the value of the matte being about \$4,628,011.

The companies producing these ores were :—

The Canadian Copper Co., Copper Cliff, Ont.

The Mond Nickel Co., Victoria Mines, Ont.

Amongst the other copper properties a 50 ton smelter was operated by the Medina Copper Company at Eldorado.

TABLE 6.

COPPER.

ONTARIO : — PRODUCTION.

Calendar Year.	Pounds.	Value.
		\$
1886.....	165,000	18,150
1887.....	322,524	36,284
1888.....	Nil.	Nil.
1889.....	1,466,752	201,678
1890.....	1,303,065	205,233
1891.....	4,127,697	531,234
1892.....	2,203,795	254,538
1893.....	3,641,504	391,461
1894.....	5,207,679	497,854
1895.....	4,576,337	492,414
1896.....	3,167,256	344,598
1897.....	5,500,652	621,023
1898.....	8,375,223	1,007,539
1899.....	5,723,324	1,007,877
1900.....	6,740,058	1,091,215
1901.....	8,695,831	1,401,507
1902.....	7,408,202	861,278
1903.....	7,172,533	949,285
1904.....	4,913,594	630,070
1905.....	8,779,259	1,368,686
1906.....	10,638,231	2,050,838

British Columbia ;—The copper production in this Province continues to increase, it being now in point of value the most important mineral product in the Province. The production in 1906, 42,990,488 pounds, shows an increase of 5,298,237 pounds or 14 per cent over the production in 1905. At the final price of copper in New York the value of the production in 1906 was \$8,287,706.

The mines of the Boundary district produced about 75 per cent of the total ; the mines of the Coast district about 12 per cent, and the Rossland mines 11 per cent.

TABLE 7.

COPPER.

BRITISH COLUMBIA—PRODUCTION.

Calendar Year.	Copper con- tained in ores, matte, etc.	Increase.		Value.
	Lbs.	Lbs.	%	
1894	324,680			\$ 31,039
1895.....	952,840	628,160	193	102,526
1896.....	3,818,556	2,865,716	301	415,459
1897.....	5,325,180	1,506,624	39	601,213
1898.....	7,271,678	1,946,498	36	874,783
1899.....	7,722,591	450,913	6	1,359,948
1900.....	9,977,080	2,254,489	29	1,615,289
1901.....	27,603,746	17,626,666	177	4,448,896
1902.....	29,636,057	2,032,311	7	3,445,488
1903.....	34,359,921	4,723,864	16	4,547,735
1904.....	35,710,128	1,350,207	3.7	4,579,110
1905.....	37,692,251	1,982,123	5.6	5,876,222
1906.....	42,990,488	5,298,237	14.1	8,287,706

TABLE 8.

BRITISH COLUMBIA—PRODUCTION BY DISTRICTS.

	1903.	1904.	1905.	1906.
	Pounds.	Pounds.	Pounds.	Pounds.
Cassiar.....	2,249	8,900		293,269
East Kootenay.....	2,730	5,472	10,606	6,910
West Kootenay—				
Nelson.....	346,218	220,500	92,663	216,034
Slocan.....	181			2,861
Trail Creek.....	8,652,127	7,119,876	5,800,294	4,750,110
All other.....	3,294			1,145
Yale—				
Boundary.....	18,485,542	22,066,407	27,670,644	32,226,782
Ashcroft, Kamloops.....	6,409	328,380	680,808	355,377
Coast districts.....	6,861,171	5,960,593	3,437,236	5,138,000
	34,359,921	35,710,128	37,692,251	42,990,488

Yukon District :—A considerable amount of exploratory work was done on copper properties at Whitehorse, Yukon district, during the year, and about 100 tons shipped from one of the claims. A short description of some of the mining claims in this district will be found in the Summary Report of the Geological Survey for 1906, pages 24 and 25.

IRON.

Iron Ore:—The total production (shipments) of iron ore in Canada in 1906 was 248,831 tons, valued at the mines at \$522,242. By provinces the production was as follows:—

	Short tons.	Value.
Nova Scotia.....	97,820	\$151,386
Quebec.....	9,933	32,938
Ontario.....	141,078	337,918
Total.....	248,831	\$522,242

The production in Nova Scotia includes nearly 50,000 tons ofankerite ore, carrying a low iron content, which is used as a flux; the balance was derived from the mines at Torbrook, Brookfield, and Londonderry. The total output was utilized by the Londonderry Iron and Mining Company at their blast furnace at Londonderry.

In Quebec the bog iron of Champlain, Joliette, Drummond, Nicolet, St. Maurice, and Vaudreuil counties, was as usual mined and used in the furnaces at Radnor Forges and Drummondville.

In Ontario about 5,000 tons of ore were shipped from the Radnor mine in Renfrew county, owned by the Canada Iron Furnace Co., and the Mineral Range Iron Co.'s mine in Hastings county, the balance of the shipments being from the Helen mine at Michipicoten, owned by the Lake Superior Power Co. The actual amount of ore mined was probably somewhat less than the above figures, as a portion of the shipments from the Helen mine was from stocked ore. The quantity of ore raised, according to the Ontario Bureau of Mines Report, was 128,049 tons. The shipments from the Radnor mine were made to the furnaces at Radnor Forges, Quebec; while of the shipments from Michipicoten about 55 per cent went to Sault Ste Marie and Hamilton, Ont., and the balance to Buffalo, Cleveland and Detroit.

TABLE 1.

IRON.

PRODUCTION OF ORE BY PROVINCES.

Calendar Year.	Nova Scotia.	Quebec.	Ontario.	British Columbia.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.
1886.....	44,388	.....	16,032	3,941	64,361
1887.....	43,532	13,401	16,598	2,796	76,330
1888.....	42,611	10,710	16,894	8,372	78,587
1889.....	54,161	14,533	.....	15,487	84,181
1890.....	49,206	22,305	.....	.....	76,511
1891.....	53,649	14,380	.....	950	68,979
1892.....	78,258	22,690	.....	2,300	103,248
1893.....	102,201	22,076	.....	1,325	125,602
1894.....	89,379	19,492	.....	1,120	109,991
1895.....	83,792	17,783	.....	1,222	102,797
1896.....	58,810	17,630	15,270	196	91,906
1897.....	23,400	22,436	2,770	2,099	50,705
1898.....	19,079	17,873	21,111	280	58,343
1899.....	28,000	19,420	25,126	2,071	74,617
1900.....	18,940	19,000	82,950	1,110	122,000
1901.....	18,619	15,489	272,538	7,000	313,646
1902.....	16,172	18,524	359,288	10,019	404,003
1903.....	40,335	12,035	209,634	2,290	264,294
1904.....	61,293	16,152	141,601	.....	219,046
1905.....	84,952	12,681	193,464	.....	291,097
1906.....	97,820	9,933	141,078	.....	248,831

TABLE 2.

IRON.

NOVA SCOTIA :—ANNUAL PRODUCTION OF ORE.
(Previous to 1886).

Calendar Year.	Tons.	Calendar Year.	Tons.
1876.....	15,274	1881.....	39,843
1877.....	16,879	1882.....	42,135
1878.....	36,600	1883.....	52,410
1879.....	29,889	1884.....	54,885
1880.....	51,193	1885.....	48,129

The exports of iron ore from Canada, as compiled from Customs reports, are shown in tables 3 and 4 for the calendar and fiscal years respectively. Nearly all the iron ore exported goes to the United States. Table 4a, which has therefore been added to show the quantity of iron ores imported into the United States from Canada, has been compiled from "The Foreign Commerce and Navigation of the United States" published at Washington.

A comparison of tables 4 and 4a, shows large discrepancies for the years 1901 to 1905, inclusive. The Canadian figures of exports for

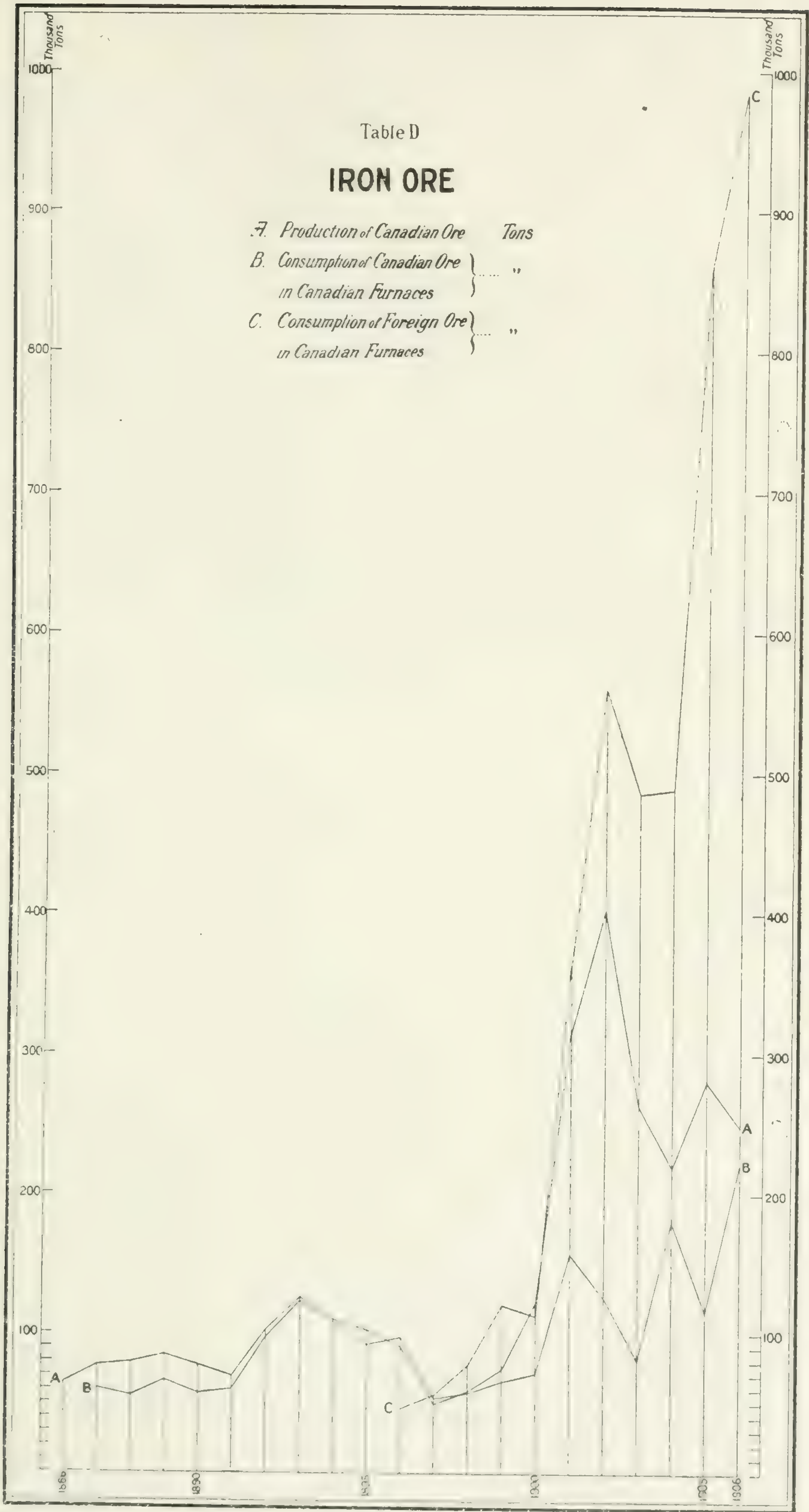
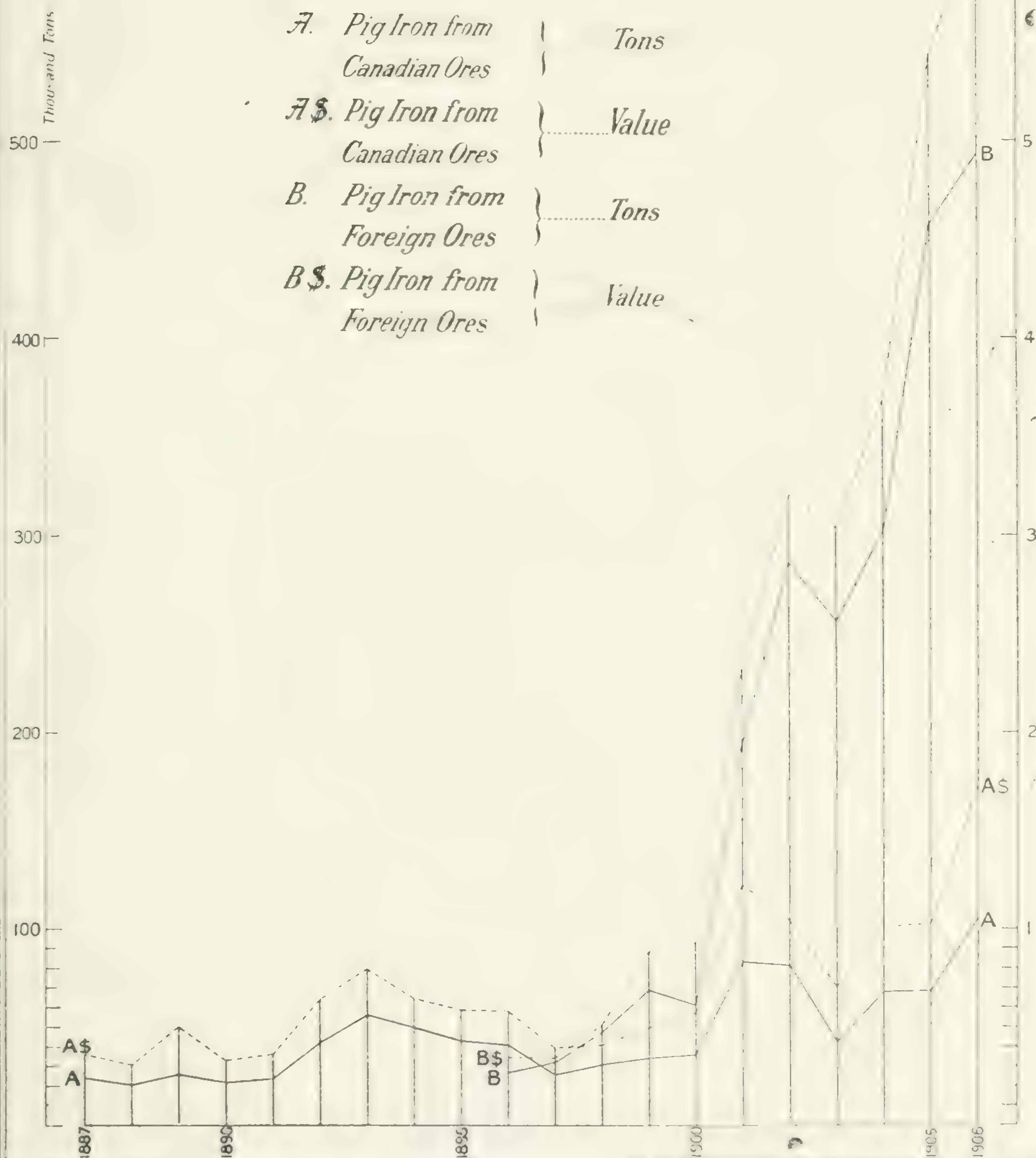


Table D.D.

PIG IRON *PRODUCTION*



these years are evidently much too high, and an investigation has shown that an error had crept into the Customs returns, owing to a duplication of certain entries.

TABLE 3.
IRON.
EXPORTS OF IRON ORE.

Calendar Year.	Tons.	Value.	Calendar Year.	Tons.	Value.
		\$			\$
1893.....	2,419	7,590	1900.....	5,527	13,511
1894.....		21,294	1901*.....	306,199	762,283
1895.....	1,571	3,909	1902*.....	428,901	1,065,019
1896.....	1,033	1,911	1903*.....	368,233	922,571
1897.....	403	811	1904*.....	168,828	401,738
1898.....	182	278	1905*.....	168,289	407,881
1899.....	4,145	9,538	1906.....	74,778	149,177

* The export figures for the four years indicated are incorrect owing to a duplication of entries.

TABLE 4.
IRON.
EXPORTS OF IRON ORE.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
		\$			\$
1879.....	3,562	7,530	1893.....	7,811	26,114
1880.....	30,524	76,474	1894.....	1,859	9,026
1881.....	44,677	114,850	1895.....	2,315	5,743
1882.....	43,835	135,463	1896.....	14	35
1883.....	44,914	138,775	1897.....	1,320	2,492
1884.....	25,308	66,549	1898.....	260	402
1885.....	54,367	132,074	1899.....	1,849	4,968
1886.....	7,542	23,039	1900.....	4,327	7,689
1887.....	23,345	71,934	1901*.....	58,401	150,657
1888.....	13,544	39,945	1902*.....	525,983	1,303,901
1889.....	24,752	60,289	1903*.....	293,510	733,230
1890.....	13,811	31,376	1904*.....	233,850	579,883
1891.....	14,648	32,582	1905*.....	224,908	540,909
1892.....	7,707	36,935	1906*.....	148,040	345,540

* See footnote to table 3, also table 4a, and remarks.

TABLE 4a.
IRON.
IMPORTS OF IRON ORE INTO THE UNITED STATES FROM CANADA.*

Year ending June 30.	Tons.	Year ending June 30.	Tons.
1893.....	6,880	1900.....	3,997
1894.....	269	1901.....	30,762
1895.....	2,394	1902.....	276,363
1896.....	35	1903.....	129,219
1897.....	2,263	1904.....	113,388
1898.....	1,172	1905.....	107,358
1899.....	2,308	1906.....	101,615

Pig Iron :—The total production of pig iron in blast furnaces in Canada in 1906 was 598,411 short tons, valued at \$7,955,136 at the furnace, as compared with 525,306 tons, valued at \$6,475,186, in 1905. The production is over twice that made in 1903. Statistics of the production of pig iron, together with the iron ore, fuel and flux used, are given in table 5 for the years 1887 to 1906 inclusive. Previous to 1896 the pig iron manufactures were entirely from Canadian ore. Since that date, however, increasing quantities of imported ore have been used, which will be found separately stated in the table. Of the total production in 1906, 18,906 tons were made with charcoal and 579,509 tons with coke.

The production by provinces was as follows :—

— —	Tons.	Value.
Nova Scotia	315,008	\$ 3,439,217
Quebec	7,845	177,644
Ontario	275,558	4,338,275
Total	598,411	\$7,955,136

The greater part of the ore charged to the Canadian furnaces continues to be imported. A large amount of the coke used, as well as a considerable portion of the limestone flux employed, is also imported. This metallurgical industry is, therefore, to a large extent dependent on imported raw material, a condition which is due to the commercial necessity of securing the raw material at a minimum cost whether this be secured in the country or out of it.

In 1906 a total of 1,204,473 tons of ore was charged to Canadian blast furnaces, of which 982,740 tons or 81·5 per cent were imported, chiefly from Newfoundland and the south shore of Lake Superior. It should be kept in mind, however, that a certain amount of ore from Canadian mines, chiefly Michipicoten, is exported to the United States. The development of important ore bodies at Bessemer and Moose Mountain, Ont., will probably also in the near future reduce the proportion of imported ore used.

TABLE 5.
IRON.
Pig Iron Production :—Consumption of Ore, Fuel, etc.

Calendar Year.	Iron Ore Consumed.			Fuel Consumed.				Flux Consumed.		Pig Iron Made.	
	Tons.	Value.	Charcoal.		Coke.		Coal.		Tons.	Value.	Value per ton.
			Bushels.	Value.	Tons.	Value.	Tons.	Value.			
1887.....	60,434	\$130,808	940,400	\$48,593	30,248	\$89,123	3,333	\$5,877	17,171	\$17,500	\$14.75
1888.....	54,956	102,343	804,286	41,800	28,031	82,986	2,197	4,709	16,857	16,533	14.37
1889.....	65,670	126,064	755,800	41,568	33,289	94,791	3,044	6,525	22,122	21,909	19.28
1890.....	57,304	117,880	589,860	29,493	32,832	97,659	1,241	2,638	18,478	18,361	15.23
1891.....	60,935	130,955	441,812	22,091	30,626	98,402	2,170	2,868	11,377	11,546	15.44
1892.....	96,948	250,966	1,121,365	78,291	50,882	152,311	1,740	1,797	22,967	21,687	15.02
1893.....	124,053	296,979	1,302,720	90,976	58,711	163,849	6,621	13,539	27,797	27,519	14.13
1894.....	108,871	223,861	1,173,970	53,958	52,373	142,303	7,653	14,571	35,101	34,347	12.94
1895.....	93,208	218,336	789,561	31,582	48,540	139,475	3,089	5,396	31,585	29,922	13.82
1896.....	(a) 96,560 (b) 46,300	200,887 100,205	756,600	32,256	(a) 48,660 (b) 33,990	106,939 109,253	1,407	2,288	37,462	36,140	13.74
1897.....	(a) 53,658 (b) 55,722	131,705 138,504	1,031,800	43,230	(a) 35,800 (b) 27,810	71,600 94,553			31,273	30,258	12.73
1898.....	(a) 57,881 (b) 77,107	151,760 213,165	836,400	41,820	(a) 31,952 (b) 50,407	63,904 158,783			33,913	31,153	11.85
1899.....	(a) 66,384 (b) 120,650	216,322 402,860	1,928,025	87,858	(a) 44,844 (b) 64,648	134,532 193,914			51,826	44,286	13.38
1900.....	(a) 71,341 (b) 113,042	184,191 351,382	1,799,737	82,408	(a) 45,021 (b) 59,345	180,084 255,892			52,966	39,332	15.55
1901.....	(a) 156,613 (b) 361,010	544,144 846,398	1,835,736	100,978	(a) 205,796 (b) 115,367	539,328 497,386	2,039	6,117	169,399	183,162	12.80
1902.....	(a) 125,664 (b) 559,381	429,753 964,979	2,146,623	118,275	(a) 360,593 (b) 112,314	898,518 494,433	1,615	5,006	293,594	219,295	11.85
1903.....	(a) 82,035 (b) 485,911	247,229 823,147	2,322,030	152,717	(a) 350,190 (b) 96,540	819,016 556,091			277,452	249,251	12.56
1904.....	(a) 180,932 (b) 454,671	489,687 922,594	3,477,470	191,404	(a) 257,182 (b) 130,210	729,585 551,445			241,278	177,595	12.15
1905.....	(a) 116,974 (b) 861,847	351,965 1,802,539	4,404,394	222,156	(a) 365,897 (b) 243,882	962,518 1,233,515			303,715	282,711	12.33
1906.....	(a) 221,733 (b) 982,740	683,238 1,984,720	2,168,476	125,992	(a) 462,672 (b) 304,676	1,248,797 1,607,324			456,036	356,733	13.29

(a) Canadian. (b) Imported.

In the tabulated statement showing the mineral production of Canada, the production from Canadian ore only is given. This has been arrived at by separating the total production at each furnace into two classes, viz., pig iron from Canadian ore and pig iron from imported ore, the separation being made on the basis of the Canadian and imported ore entering into the production of pig iron at each respective furnace.

The production for the past eleven years separated in this way has been as follows :—

Calendar Year.	Pig iron from Canadian ore.	Pig iron from Imported ore.
	Tons.	Tons.
1896.....	40,720	26,548
1897.....	26,200	31,807
1898.....	30,553	46,462
1899.....	34,244	68,699
1900.....	35,387	61,188
1901.....	83,100	191,276
1902.....	71,664	286,238
1903.....	42,052	255,833
1904.....	68,297	235,157
1905.....	68,170	457,136
1906.....	104,660	493,751

During the year there were thirteen furnaces in blast for varying periods, operated by the following companies :—

Dominion Iron and Steel Co., Sydney, C.B., four completed furnaces of 275 tons capacity each per day, all of which were operated during the year.

Nova Scotia Steel and Coal Co., New Glasgow, N.S., one furnace at Sydney Mines, C.B., of 200 tons capacity.

Londonderry Iron and Mining Co., Limited, Londonderry, N.S., one furnace of 100 tons capacity.

John McDougall & Co., Montreal, Que., two small furnaces at Drummondville, Que., one of which was operated the whole year.

Canada Iron Furnace Co., Ltd., Montreal, Que., one furnace of 150 tons at Midland, Ont.

SESSIONAL PAPER No. 26b

Deseronto Iron Co., Ltd., Deseronto, Ont., one furnace with a daily capacity of about 35 tons.

Hamilton Steel and Iron Co., Hamilton, Ont., one furnace of 300 tons capacity operated throughout the year, and a second furnace of 300 tons in course of construction.

Algoma Steel Co., Ltd., Sault Ste Marie, Ont., two furnaces at Steelton near Sault Ste Marie, of a combined capacity of about 400 tons.

The Atikokan Iron Co., Ltd., was also building at Port Arthur Ont., a furnace with a capacity of about 100 tons per day.

Of the fourteen completed furnaces nine were in blast and five were idle, on Dec. 31, 1906. The total capacity of the fourteen furnaces, if in continuous operation, would be about 800,000 tons per annum.

The number of men employed was 1,808, and about \$1,000,000 was paid in wages.

Bounties :—Bounties on iron and steel, made in Canada, were provided for by the Dominion government in 1897 (chapter 6, Statutes of Canada, 1897.) This Act was amended in 1899 (chapter 8, Statutes of Canada, 1899), and again in 1903 (chapter 68, Statutes of Canada, 1903).

The Act of 1903 also provides for the gradual extinguishment of the bounties authorized in 1897 as follows :—

Period.	On steel ingots, puddled iron bars, and pig iron from Canadian ore.	On pig iron from foreign ore.
	Per ton.	Per ton.
From July 1, 1903 to June 30, 1904.....	\$ 2 70	\$ 1 80
" 1904 " " 1905.....	2 25	1 50
" 1905 " " 1906.....	1 65	1 10
" 1906 " " 1907.....	1 05	0 70

The payments by the Dominion Government on account of iron and steel bounties during the fiscal year ending June 30, 1906, were as follows, the figures having been compiled from the Auditor General's Report for 1906.

BOUNTIES PAID ON PIG IRON MANUFACTURED IN CANADA, FISCAL YEAR 1905-6.

Company.	On Pig Iron from Canadian Ore.		On Pig Iron from Imported Ore		Total Bounties.
	Tons.	Bounties.	Tons.	Bounties.	
		\$ cts.		\$ cts.	\$ cts.
Algoma Steel Co., Ltd....	4,640·01	7,656 15	145,239·82	159,763 81	167,419 96
Canada Iron Furnace Co. Ltd.—					
Midland, Ont.	31,09·00	51 31	29,055·90	31,961 47	32,012 78
Radnor Forges, Que....	3,615·48	5,965 54	2,070·35	2,277 39	8,242 93
Deseronto Iron Co.,	674·00	1,122 10	11,411·00	12,552 10	13,664 20
Dominion Iron and Steel Co. Hamilton Steel and Iron Co., Ltd.	5·64	9 30	223,948·94	246,343 83	246,353 13
John McDougall & Co....	43,634·58	71,997 03	24,449·79	26,894 75	98,891 78
Londonderry Iron & Min- ing Co., Ltd.	2,695·19	4,447 06	.....	.....	4,447 06
Nova Scotia Steel and Coal Co., Ltd	31,227·38	51,525 16	.....	.....	51,525 16
	.....	.....	59,158·90	65,074 79	65,074 79
	86,523·468	142,763 65	495,334·70	544,868 14	687,631 79

BOUNTY ON STEEL INGOTS AND PUDDLED IRON BARS, FISCAL YEARS 1905-6.

Company.	Tons.	Bounty.
		\$ cts.
Algoma Steel Company, Steel Ingots	222,891·06	367,770 24
Dominion Iron and Steel Co., Ltd., Steel Ingots.....	246,356·02	406,487 47
Steel Ingots made during the year 1903-4.....	771·53	2,083 13
Hamilton Steel and Iron Co., Ltd., Steel Ingots.. ...	41,124·60	67,855 55
Puddled Iron Bars.....	3,560·42	5,874 71
Nova Scotia Steel and Coal Co., Ltd., Steel Ingots.....	56,915·64	93,910 79
	571,619·27	943,981 89

BOUNTIES PAID ON ARTICLES MANUFACTURED FROM STEEL, FISCAL YEAR 1905-6.

Company.	Tons.	Bounty.
		\$ cts.
Dominion Iron and Steel Co., Ltd.—		
Steel Wire Rods at \$6.....	50,184·45	301,106 73
" " Arrears of 1904-5 at \$6.....	217·775	1,306 65
Hamilton Steel and Iron Co., Ltd.—		
Steel Angles at \$3.....	11,405·73	34,217 19
Montreal Rolling Mills Co.—		
Rail Joints, Slates, etc., at \$3.	2,462·19	7,386 56
Nova Scotia Steel and Coal Co.—		
Plates, Angles, etc. at \$3.....	8,604·86	25,814 60
	72,875·005	369,831 73

SESSIONAL PAPER No. 26b

TOTAL BOUNTIES PAID TO EACH COMPANY, FISCAL YEAR ENDING JUNE 30, 1906.

Algoma Steel Co., Ltd.....	\$ 535,190 20
Canada Iron Furnace Co., Ltd.....	40,255 71
Deseronto Iron Co., Ltd.....	13,664 20
Dominion Iron and Steel Co., Ltd.....	957,337 11
Hamilton Steel and Iron Co., Ltd.....	206,839 23
John McDougall & Co.....	4,447 06
Londonderry Iron and Mining Co., Ltd.....	51,525 16
The Montreal Rolling Mills Co.....	7,386 56
Nova Scotia Steel and Coal Co., Ltd.....	187,692 79
	<hr/>
	2,004,338 02

The total amount of bounties on iron and steel paid by the Dominion Government during the fiscal year ending June 30, 1906, was, therefore, as follows :—

Bounties on pig iron.....	\$ 687,631 79
" steel ingots and puddled iron bars.....	943,981 89
" articles manufactured from steel.....	369,831 73
Arrears to Nova Scotia Steel and Coal Co., Ltd., from July 1903 to July 1905.....	2,892 61
	<hr/>
	2,004,338 02

Since the first of January 1907, the rate of bounty payment on iron and steel has been changed by an Act assented to 27th April 1907, (Chapter 24, Statutes of Canada, 1907). The new Act governing bounty payments is as follows :—

An Act respecting Bounties on Iron and Steel made in Canada.

(Assented to 27th April, 1907).

His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows :—

1. The Governor in Council may authorize the payment out of the Consolidated Revenue Fund of the following bounties on the under-mentioned articles when manufactured in Canada for consumption therein, viz. :—

(a) In respect of pig iron manufactured from ore, on the proportion from Canadian ore produced during the calendar year —

1907.....	\$2 10 per ton.
1908.....	2 10 "
1909.....	1 70 "
1910.....	0 90 "

(b) In respect of pig iron manufactured from ore, on the proportion from foreign ore produced during the calendar year—

1907.....	\$1 10 per ton.
1908.....	1 10 "
1909.....	0 70 "
1910.....	0 40 "

(c) On puddled bar iron manufactured from pig iron made in Canada during the year.

1907.....	\$1 65 per ton.
1908.....	1 65 "
1909.....	1 05 "
1910.....	0 60 "

(d) In respect of rolled, round wire rods not over three-eighths of an inch diameter, manufactured in Canada from steel produced in Canada from ingredients of which not less than fifty per cent of the weight thereof consists of pig iron made in Canada, on such wire rods made after the thirty-first day of December, one thousand nine hundred and six, six dollars per ton.

(e) In respect of steel manufactured from ingredients of which not less than fifty per cent of the weight thereof consists of pig iron made in Canada, on such steel made during the calendar year—

1907	\$1 65 per ton.
1908.....	1 65 "
1909	1 05 "
1910.....	0 60 "

2. No bounty shall be paid under the foregoing provisions in respect of iron or steel made in Canada by electric process after the thirty-first day of December, one thousand nine hundred and eight.

1. The Governor in Council may authorize the payment out of the Consolidated Revenue Fund of the following bounties on the under-mentioned articles when manufactured in Canada for consumption therein, viz. :—

(a) On pig iron manufactured from Canadian ore by the process of electric smelting during the calendar year—

1909.....	\$2 10 per ton.
1910.....	2 10 "
1911.....	1 70 "
1912.....	0 90 "

(b) On steel manufactured by electric process from pig iron smelted in Canada by electricity from Canadian ore during the calendar year—

1909.....	\$1 65 per ton.
1910	1 65 "
1911	1 05 "
1912.....	0 60 "

2. Bounty, as on pig iron under this section, may be paid upon the molten iron from the ore which in the electric furnace enters into the manufacture of steel by the direct process, the weight of the steel so manufactured.

SESSIONAL PAPER No. 26b

3. No bounty shall be paid on steel ingots from which steel blooms and billets for exportation from Canada are manufactured.

4. The Governor in Council may make regulations to carry out the intention of this Act.

5. The Minister of Trade and Commerce shall be charged with the administration of this Act.

6. Chapter 8 of the Statutes of 1899, Chapter 68 of the Statutes of 1903, and Chapter 39 of the Statutes of 1904, are repealed.

7. This Act shall be deemed to have come into force on the first day of January, one thousand nine hundred and seven.

Table 6 illustrates the extent of the foreign trade of the country in regard to iron and steel products and machinery, etc., made therefrom.

TABLE 6.

IRON.

EXPORTS OF IRON AND STEEL GOODS, THE PRODUCT OF CANADA.

Calendar Year 1905.	Quantity.	Value.
		\$
Stoves..... No.	974	10,295
Castings, N.E.S..... \$		48,903
Pig iron.....Tons.	305	7,429
Machinery, N.E.S..... \$		424,057
Sewing machines..... No.	1,477	33,690
Typewriters..... "	5,502	164,466
Scrap iron and steel..... Cwt.	258,938	235,913
Hardware..... \$		164,649
Steel and manufactures of..... "		463,561
Total.....		1,552,963

The Canadian consumption of iron and steel products is illustrated in the following tables, Nos. 7, 8, 9, 10a, 10b, and 11. The first three of these deal with the cruder forms of the metal; the next two, with manufactured articles wholly or largely composed of iron and steel, while the last table summarizes all the preceeding ones. They all cover the fiscal year ending June 30, 1906.

TABLE 7.

IRON.

IMPORTS OF IRON, PIG, SCRAP, ETC.

Fiscal Year.	Pig Iron.		Charcoal Pig Iron.		Old and Scrap Iron.		Wrought Scrap and Scrap Steel.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
		\$		\$		\$		\$
1880	(a) 23,159	371,956	.....	.....	928	14,042	.....	.....
1881	(a) 43,630	715,997	.....	.....	584	8,807	.....	.....
1882	56,594	811,221	6,837	211,791	1,327	20,406	.....	.....
1883	75,295	1,085,755	2,198	58,994	709	7,776	.....	.....
1884	49,291	653,708	2,893	66,602	3,136	44,223	.....	.....
1885	42,279	545,426	1,119	27,333	3,552	46,275	.....	.....
1886	42,463	528,483	3,185	60,086	10,151	158,100	.....	.....
1887	46,295	554,388	3,919	77,420	17,612	220,167	(b) 79	1,086
Pig Iron, etc. (c)								
	Tons.	Value.						
		\$						
1888	48,973	648,012	.....	.....	.....	.....	23,293	297,496
1889	72,115	864,752	.....	.....	.....	.....	26,794	335,090
1890	87,613	1,148,078	.....	.....	.....	.....	47,846	678,574
1891	81,317	1,085,929	.....	.....	.....	.....	43,967	652,842
1892	68,918	886,485	.....	.....	.....	.....	32,627	433,695
Pig Iron. Charcoal Pig Iron. Cast Scrap Iron.								
	Tons.	Value.	Tons.	Value.	Tons.	Value.		
		\$		\$		\$		
1893	56,849	682,209	5,944	84,358	729	9,317	45,459	574,809
1894	42,376	483,787	2,906	34,968	78	771	30,850	369,682
1895	31,637	341,259	2,780	31,171	643	4,347	23,390	244,388
1896	36,131	394,591	917	11,726	93	741	13,607	157,996
1897	25,766	291,788	2,936	35,373	238	1,362	7,903	93,541
1898	37,186	382,103	2,250	23,533	1,559	13,251	(e)48,903	534,577
1899	44,261	452,911	1,955	19,123	2,378	22,594	(e)28,352	301,268
1900	49,767	811,490	1,816	38,736	13,747	150,681	(e)38,753	638,505
1901	35,293	548,033	490	7,121	4,499	51,032	(e)24,773	242,189
1902	39,978	585,077	38	726	3,048	38,958	(e)36,150	520,909
1903	91,730	1,338,574	(f) 882	16,352	7,137	94,028	(e)43,115	670,402
1904	62,515	894,728	.....	.....	11,385	149,923	(e)21,027	298,806
1905	71,005	857,879	.....	.....	6,533	75,521	(e)15,479	210,900
1906	(d) 96,797	1,401,047	.....	.....	(f) 4,866	60,086	(e)21,223	326,489

(a) Comprises pig iron of all kinds.
(b) From May 13 only.
(c) These figures appear in Customs reports under heading 'Iron in pigs, Iron kentledge and cast-iron.'
(d) Includes iron kentledge. Duty \$2.50 per ton.
(e) Scrap iron and scrap steel, old, and fit only to be remanufactured, being part of, or recovered from, any vessel wrecked in waters subject to the jurisdiction of Canada. Duty free.
Iron or steel scrap, wrought, being waste or refuse, including punchings, cuttings and clippings of iron or steel plates or sheets, having been in actual use, crop ends of tin plate bars, blooms and rails, the same not having been in actual use. Duty \$1 per ton.
(f) Duty \$2.50 per ton.

TABLE 8.
IRON.

IMPORTS OF FERRO-MANGANESE, ETC.

Fiscal Year.	Tons.	Value.
*1887	123	\$ 1,435
*1888	1,883	29,812
*1889	5,868	72,108
*1890	696	18,895
*1891	2,707	40,711
*1892	1,311	23,930
*1893	529	15,858
*1894	284	9,885
†1895	164	5,408
†1896	652	12,811
†1897	426	9,233
†1898	1,418	22,516
†1899	1,160	22,539
†1900	1,149	39,064
†1901	1,512	38,954
†1902	6,513	150,977
†1903	6,350	162,710
†1904	2,975	75,554
†1905	12,935	246,815
†1906..... (Duty, 5 p.c.)	15,023	462,739

* These amounts include :—Ferro-manganese, ferro-silicon, spiegel, steel bloom ends and crop ends of steel rails, for the manufacture of iron or steel.
† Ferro-silicon, spiegeleisen, and ferro-manganese.

TABLE 9.
IRON.

IMPORTS : IRON IN SLABS, BLOOMS, LOOPS AND PUDDLED BARS, ETC.

Fiscal Year.	Cwt.	Value.	Fiscal Year.	Cwt.	Value.
1880.....	195,572	\$244,601	1893.....	65,269	\$58,533
1881.	111,666	111,374	1894.....	50,891	45,018
1882.....	203,888	222,056	1895.....	78,639	67,321
1883.....	258,639	269,818	1896.....	128,535	110,757
1884.....	252,310	264,045	1897.....	56,560	48,954
1885.	312,329	287,734	1898.....	162,891	122,426
1886.....	273,316	248,461	1899.....	124,311	103,198
1887	522,853	421,598	1900.....	255,145	362,463
1888.....	110,279	93,377	1901.....	234,925	206,975
1889.....	80,383	67,181	1902.....	401,306	419,543
1890.....	15,041	45,923	1903.....	394,418	380,034
1891.....	41,567	38,931	1904.....	200,295	216,571
1892.....	64,397	56,186	1905.....	317,829	319,665
			1906*	650,943	663,794

* Iron or steel ingots, cogged ingots, blooms, slabs, billets, puddled bars, and loops or other forms, N.O.P., less finished than iron or steel bars, but more advanced than pig iron except castings. Duty \$2 per ton.

TABLE 10a.

IRON.

IMPORTS OF IRON AND STEEL GOODS.—1905-1906.

Fiscal Year, 1906.	Duty.	Quantity.	Value.
Bar iron or steel rolled, whether in coils, bundles, rods or bars, comprising rounds, ovals, squares and flats and rolled shapes, N.O.P.....	Cwt.		\$
Castings, iron or steel, in the rough, N.E.S.	\$	987,429	1,541,729
Canada plates, Russia iron, flat galvanized iron or steel sheets, terne plates and rolled sheets of iron or steel coated with zinc, spelter or other metal, of all widths or thicknesses, N.O.P.....	Cwt.	303,735	699,744
Iron or steel bridges or parts thereof, iron or steel structural work, columns, shapes or sections drilled, punched, or in any further stage of manufacture than as rolled or cast, N.E.S.....	"	55 "	185,678
Malleable iron castings and iron or steel castings, N.E.S.....	"	25 "	4,957
Mould boards, or shares or plough plates, land sides and other plates for agricultural implements, cut to shape from rolled plates of steel but not moulded, punched, polished or otherwise manufactured.....	"	5 "	67,845
Iron or steel railway bars or rails of any form, punched or not punched, N.E.S., for railways, which term for the purposes of this item shall include all kinds of railways, street railways and tramways, even although the same are used for private purposes only, and even although they are not used or intended to be used in connexion with the business of common carrying of goods or passengers.....	Tons.	30 "	49,878
Railway fish-plates and tie plates.....	"	88 per ton.	4,387
Rolled iron or steel angles, tees, beams, channels, joists, girders, zeos, stars or rolled shapes, or trough, bridge, building, or structural rolled sections, or shapes not punched, drilled or further manufactured than rolled, N.E.S., and flat eye-bar blanks not punched or drilled.....	Cwt.	10 %	1,066,653
Rolled iron or steel hoop, band, scroll or strip, 8 inches or less in width, No. 18 gauge and thicker, N.E.S.....	"	\$7 per ton.	63,296
Rolled iron or steel hoop, band, scroll or strip, thinner than No. 18 gauge, N.E.S.	"	5 "	56,958
Rolled iron or steel angles, tees, beams, channels, girders and other rolled shapes or sections, weighing less than 35 lbs. per lineal yard, not punched, drilled or further manufactured than rolled, N.O.P.	"	\$7 per ton.	376,692
Rolled iron or steel plates or sheets, sheared or unsheared, and skelp iron or steel, sheared or rolled in grooves, N.E.S.....	"	\$7 "	256,235
Rolled iron or steel plates, not less than 30 inches in width and not less than ¼ inch in thickness, N.O.P.....	"	10 "	589,151
Carried forward.....			8,240,190

TABLE 10a—Continued.

IRON.

IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1906.	Duty.	Quantity.	Value.
			\$
Brought forward.....			8,240,190
Rolled iron or steel sheets No. 17 gauge and thinner, N.O.P..... Cwt.	5 p. c.	342,850	719,180
Rolls of chilled iron or steel..... "	30 "	10,496	34,172
Skelp iron or steel, sheared or rolled in grooves, imported by manufacturers of wrought iron or steel pipe for use only in the manufacture of wrought iron or steel pipe in their own factories..... "	5 "	680,729	888,257
Swedish rolled iron and Swedish rolled steel nail rods under half an inch in diameter for the manufacture of horse-shoe nails.. "	15 "	20,459	42,429
Switches, frogs, crossings and intersections for railways..... "	30 "	13,746	55,120
Steel—chrome steel..... "	15 "	5,275	24,614
Steel plate, universal mill or rolled edge bridge plates imported by manufacturers of bridges..... "	10 "	243,768	347,360
Steel in bars, bands, hoops, scroll or strips, sheets or plates, of any size, thickness or width when of greater value than 2½c. per lb., N.O.P. "	5 "	173,240	856,354
Iron or steel beams, sheets, plates, angles, knees and cable chains for wooden, iron, steel, or composite ships or vessels..... "	Free.	210,753	315,664
Locomotive and car wheel tires of steel, in the rough..... "	"	80,365	161,914
Steel for saws and straw cutters cut to shape, but not further manufactured..... "	"	11,811	131,399
Crucible sheet steel, 11 to 16 gauge, 2½ to 18 inches wide, imported by manufacturers of mower and reaper knives for manufacture of such knives in their own factories..... "	"	10,337	42,702
Steel of No. 20 gauge and thinner, but not thinner than No. 30 gauge, for the manufacture of corset steels, clock springs and shoe shanks imported by the manufacturers of such articles for the exclusive use in the manufacture thereof in their own factories..... "	"	60	278
Steel valued at 2½ cents per lb. and upward, imported by the manufacturers of skates, for use exclusively in the manufacture thereof in their own factories..... "	"	3,592	16,007
Steel, under ½ inch in diameter, or under ½ inch square, imported by the manufacturers of cutlery, or of knobs, or of locks, for use exclusively in the manufacture of such articles in their own factories..... "	"	3,095	7,701
Carried forward.....			11,883,341

TABLE 10a—*Concluded.*

IRON.

IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1906.	Duty.	Quantity.	Value.
Brought forward...			11,883,341
Steel, No. 12 gauge and thinner, but not thinner than No. 30 gauge, for the manufacture of buckle clasps, bed fasts, furniture casters and ice creepers, imported by the manufacturers of such articles, for use exclusively in the manufacture thereof in their own factories... Cwt.	Free.	2,099	5,379
Steel of No. 24 and 17 gauge, in sheets sixty-three inches long, and from 18 inches to 32 inches wide, imported by the manufacturers of tubular bow sockets for use in the manufacture of such articles in their own factories..... "	"	1,174	2,349
Steel for the manufacture of bicycle chains, imported by the manufacturers of bicycle chain for use in the manufacture thereof in their own factories..... "	"	178	680
Steel for the manufacture of files, augers auger bits, hammers, axes, hatchets, scythes, reaping hooks, hoes, hand rakes, hay or straw knives, windmills and agricultural or harvesting forks imported by the manufacturers of such or any of such articles for use exclusively in the manufacture thereof in their own factories ... "	"	99,399	198,970
Steel springs for the manufacture of surgical trusses imported by the manufacturers for use exclusively in the manufacture thereof in their own factories..... "	"	980	443
Flat spring steel, steel billets and steel axle bars, imported by manufacturers of carriage springs and carriage axles for use exclusively in the manufacture of springs and axles for carriages or vehicles other than railway or tramway, in their own factories ... "	"	93,125	127,105
Spiral spring steel for spiral springs for railways, imported by the manufacturers of railway springs for use exclusively in the manufacture of railway spiral springs in their own factories..... "	"	73,117	123,460
Steel for the manufacture of cutlery when imported by manufacturers of cutlery to be used in their own factories in the manufacture of such article, O.C..... "	"	271	637
Total			12,342,364

SESSIONAL PAPER No. 26b

TABLE 106.

IRON.

IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1906.		Duty.	Quantity.	Value.
				\$
Agricultural implements, N.E.S., viz:—				
Cultivators and weeders	No.	20 %	3,828	26,297
Drills, grain seeders,	"	20 "	2,835	117,233
Farm, road or field rollers	"	25 "	10	204
Forks, pronged	"	25 "	8,565	5,249
Harrows	"	20 "	4,386	66,202
Harvesters, self binding	"	20 "	927	95,846
Hay loaders	"	25 "	582	26,435
Hay tedders	"	25 "	815	34,076
Hoes	"	25 "	4,902	873
Horse rakes	"	20 "	929	21,587
Knives, hay or straw	"	25 "	1,265	60
Lawn mowers	"	35 "	2,697	13,404
Manure spreaders	"	20 "	1,133	108,054
Mowing machines	"	20 "	766	24,692
Ploughs	"	20 "	17,033	477,703
Post hole diggers	"	25 "	1,485	1,326
Potato diggers	"	25 "	226	7,484
Rakes, N.E.S.	"	25 "	9,620	1,822
Reapers	"	20 "	284	13,872
Scythes	Doz.	25 "	2,000	10,043
Sickles or reaping hooks	"	25 "	41	185
Spades and shovels and spade and shovel blanks, and iron or steel cut to shape for the same	"	35 "	15,113	46,762
Parts of agricultural implements paying 20 p.c.	\$	20 "		472,771
All other agricultural implements, N.E.S.	"	25 "		42,384
Anvils and vises	"	30 "		50,792
Cart or wagon skeins or boxes	Lbs.	30 "	167,454	9,404
Springs, axles, axle bars, N. E. S., and axle blanks and parts thereof of iron or steel, for railway or tramway or other vehicles	Cwt.	35 "	68,948	143,874
Butts and hinges, N.E.S.	\$	30 "		92,656
Cast iron pipe of every description	Cwt.	\$8 per ton	343,404	447,450
Chains, coil chains, chain links and chain shackles of iron or steel 5-16 of an inch in diameter and over	"	5 "	40,617	141,639
Chain, malleable sprocket or link belt-ing, for binders	\$	20 "		43,988
Chains, N.E.S.	"	30 "		99,188
Tacks, shoe	Lbs.	35 "	20,886	2,442
Cut tacks, brad sprigs, or shoe nails, double pointed, and other tacks of iron and steel, N.O.P.	"	35 "	77,130	4,858
Engines, locomotives for railways, N.E.S.	No.	35 "	85	338,179
Fire engines	"	35 "	5	4,150
Fire extinguishing machines	"	35 "		53,298
Gasoline engines	"	25 "	2,068	405,323
Steam engines and boilers	"	25 "	1,698	596,299
Fittings, iron or steel, for iron and steel pipe	Lbs.	30 "	6,696,592	386,834
Carried forward				4,434,937

TABLE 10b—Continued.

IRON.				
IMPORTS OF IRON AND STEEL GOODS.				
Fiscal Year, 1906.	Duty.	Quantity.	Value.	
			\$	
Brought forward			4,434,937	
Forgings of iron or steel, of whatever shape or size, or in whatever stage of manufacture, N.E.S., and steel shafting, turned, compressed or polished, and hammered iron or steel bars or shapes, N.O.P.....	Lbs.	30 %	4,098,111	170,326
Hardware, viz: -				
Builders', cabinet-makers', upholsterers', harness-makers', saddlers' and carriage hardware, including currycombs and horse boots, N.E.S.....	\$	30 "		752,110
Horse, mule and ox shoes	"	30 "		14,337
Locks of all kinds	"	30 "		283,306
Machines and machinery, etc.:—				
Automobiles.....	No.	25 "	448	645,871
Fanning mills.....	"	25 "	267	3,144
Grain crushers.....	"	25 "	1	71
Windmills.....	"	25 "	909	41,934
Ore crushers and rock crushers, stamp mills, cornish and belted rolls, rock drills, air compressors, cranes, derricks and percussion coal cutters.....	\$	25 "		206,593
Portable machines: -				
Fodder or feed cutters.....	No.	25 "	27	704
Horse powers.....	"	25 "	11	556
Portable engines.....	"	25 "	638	717,785
Portable saw mills and planing mills.....	"	25 "	73	31,382
Threshers and separators.....	"	25 "	652	359,986
All other portable machines	"	25 "	925	102,133
Parts of portable machines.....	\$	25 "		142,124
Sewing machines and parts of.....	No.	30 "	14,138	284,189
Slot machines.....	"	25 "	2,388	41,603
Machines, type-writing.....	"	25 "	4,933	283,323
All other machinery composed wholly or in part of iron or steel, N.O.P.....	\$	25 "		5,331,714
Nails and spikes, composition and sheathing nails.....	Lbs.	15 "	11,159	1,319
Nails and spikes, wrought and pressed, trunk, clout, coopers, cigar box, Hungarian horseshoe and other nails, N.E.S.	"	30 "	207,647	14,115
Nails and spikes, cut, and railway spikes..	"	½c. per lb.	2,138,075	39,278
Nails, wire of all kinds, N.O.P.....	"	½c. "	530,275	18,318
Pumps, N.E.S.....	\$	25 %		261,220
Sad or smoothing, hatters' or tailors' irons, plated wholly or in part or not.....	"	25 "		16,718
Safes, doors for safes and vaults.....	"	30 "		114,131
Screws, iron and steel, commonly called 'woodscrews,' N.E.S.....	Lbs.	35 "	208,823	29,481
Scales, balances, weighing beams and strength testing machines.....	\$	30 "		134,401
Skates of all kinds and parts thereof.....	Pairs	35 "	86,826	49,628
Stoves of all kinds and parts thereof, N.E.S.	\$	25 "		472,981
Sheets, flat, of galvanized iron or steel....	Cwt.	5 "	369,580	1,101,128
Carried forward.....				16,100,846

TABLE 10*b*—Continued.

IRON.

IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1906.	Duty.	Quantity.	Value.
			\$
Brought forward			16,100,846
Sheet iron or steel corrugated, galvanized.. Cwt.	25 "	3,296	9,520
Sheet iron or steel corrugated not galvanized "	30 "	887	2,191
Tubing:—			
Boiler tubes of wrought iron or steel, including flues and corrugated tubes for marine boilers..... \$	5 "		472,768
Tubes of rolled steel, seamless, not joined or welded, not more than 1½ inches in diameter..... "	10 "		4,199
Tubes, seamless steel, for bicycles..... "	10 "		10,214
Tubing, wrought iron or steel, plain or galvanized, threaded and coupled or not, over 2 inches in diameter, N.E.S. "	15 "		554,459
Tubing, wrought iron or steel, plain or galvanized, threaded and coupled or not, 2 inches or less in diameter, N. E.S. "	35 "		109,675
Other iron or steel tubes or pipes, N.O.P. "	30 "		59,036
Ware, galvanized sheet iron or of galvanized sheet steel, manufactures of, N.O.P. "	25 "		27,821
Ware, agate, granite or enamelled iron or steel hollow ware..... "	35 "		75,935
Ware, enamelled iron or steel ware, N. E.S., iron or steel hollow ware, plain black, tinned or coated, and nickel and aluminium kitchen or household hollow ware, N.E.S. "	30 "		167,833
Wire bale ties..... Bundles of 250 ties	30 "	3,743	4,932
Wire cloth or wove wire and netting of iron or steel..... Lbs.	30 "	1,132,220	67,813
Wire screens, doors and windows..... \$	30 "		5,950
Wire fencing, woven, buckthorn strip and wire fencing of iron or steel, N.E.S. Lbs.	15 "	1,757,932	73,068
Wire, single or several, covered with cotton, linen, silk, rubber or other material, etc., N.E.S. "	30 "	2,223,542	355,841
Wire of all kinds, N.O.P. "	20 "	10,689,693	245,443
Wire rope, stranded or twisted wire, clothes lines, picture or other twisted wire and wire cables, N.E.S. "	25 "	3,005,328	209,674
Iron or steel nuts, washers, rivets and bolts with or without threads and nut bolt and hinge blanks, and T. and strap hinges of all kinds, N.E.S. "	¾ c.p. lb. and 25 "	3,006,047	118,357
Pen-knives, jack-knives and pocket knives of all kinds..... \$	30 "		142,550
Table cutlery, all kinds, N.O.P. "	30 "		260,403
All other cutlery, N.E.S. "	30 "		335,742
Guns, rifles, including air guns and air rifles, (not being toys) muskets, cannons, pistols, revolvers, or other firearms ... "	30 "		434,674
Carried forward			19,848,944

TABLE 10*b*—Continued.

IRON.

IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1906.	Duty.	Quantity.	Value.
			\$
Brought forward.....			19,848,944
Bayonets, swords, fencing foils and masks.. "	30 "		2,487
Needles of any material or kind, not other- wise provided "	30 "		81,415
Tools and implements :—			
Adzes, cleavers, hatchets, wedges, sledges, hammers, crow bars, cant dogs, and track tools, picks, mattocks and eyes or poles for the same..... \$	30 %		87,025
Axes..... Doz.	25 "	6,051	35,123
Saws..... \$	30 "		206,528
Files and rasps, N.E.S. "	30 "		88,211
Tools, hand or machine, of all kinds, N.O.P. "	30 "		119,661
Knife blades, or blanks, and forks of iron or steel, in the rough, not handled, filed, ground or otherwise manufactured.. "	10 "		70
Manufactures : articles or wares not speci- ally enumerated or provided for, com- posed wholly or in part of iron or steel, and whether partly or wholly manufactured. "	30 "		3,017,901
Anchors..... Cwt.	Free	4,795	18,043
Iron or steel, rolled round wire rods, in the coil not over $\frac{3}{8}$ -inch in diameter, imported by wire manufacturers for use in making wire in the coil in their own factories	"	376,220	478,991
Iron or steel masts, or parts of	"	18	367
Rolled iron tubes not welded, or joined, under $1\frac{1}{2}$ inch in diameter, angle iron 9 and 10 gauge, not over $1\frac{1}{2}$ inch wide, iron tubing lacquered or brass covered, not over $1\frac{1}{2}$ inch diameter, all of which are to be cut to lengths for the manu- facture of bedsteads, and to be used for no other purpose, and brass trimmings for bedsteads imported for the manu- facture of iron or brass bedsteads..... "	"		212,340
Steel bowls for cream separators, and cream separators \$	"		625,510
Cream separators : articles for the construc- tion or manufacture of—when imported by manufacturers of cream separators to be used in their own factories for the manufacture of cream separators, O.C.... "	"		95,578
Steel strip and flat steel wire imported by manufacturers of buckthorn and plain strip fencing, for use in their own facto- ries in the manufacture thereof... .. "	"	80	277
Carried forward.....			25,818,471

TABLE 10*b*—*Concluded*.

IRON.

IMPORTS OF IRON AND STEEL GOODS.

Fiscal Year, 1906.	Duty.	Quantity.	Value.
			\$
Brought forward			25,818,471
Steel wire, Bessemer soft drawn spring of Nos. 10, 12 and 13 gauge respectively, and homo steel spring wire of Nos. 11 and 12 gauge, respectively, imported by manufacturers of wire mattresses, to be used in their own factories in the manufacture of such articles.....	"	Free.	3,675
Machinery and structural iron for beet root sugar factories.....	\$	"	7,043
Flat steel wire of No. 16 gauge or thinner imported by the manufacturers of crinoline, corset wire and dress stays, for use in the manufacture of such articles in their own factories.....	Cwt.	"	3,885
Wire, crucible cast steel	Lbs.	"	2,427,406
Galvanized iron or steel wire Nos. 9, 12 and 13 gauge... ..	Cwt.	"	545,339
Barbed fencing wire of iron and steel.....	"	"	446,212
Total.....			27,998,941

TABLE 11.

IRON.

IMPORTS OF PIG IRON, IRON AND STEEL GOODS, ETC., FISCAL YEAR, 1905-1906.
Recapitulation of Tables, 7, 8, 9, 10*a* and 10*b*.

	Tons.	Value.
Pig iron	96,797	\$1,401,047
Pig iron, charcoal.....		
Scrap iron, cast.....	4,866	60,086
Scrap steel, wrought.....	21,223	326,489
Ferro-manganese, etc.....	15,023	462,739
Iron in slabs, blooms, puddled bars, etc.....	32,547	663,794
Iron and steel goods partially manufactured.....		12,312,364
Iron and steel goods more highly manufactured*..		27,978,941
Total.....		43,235,480

* Machinery, etc., classed under iron and steel goods in Customs report.

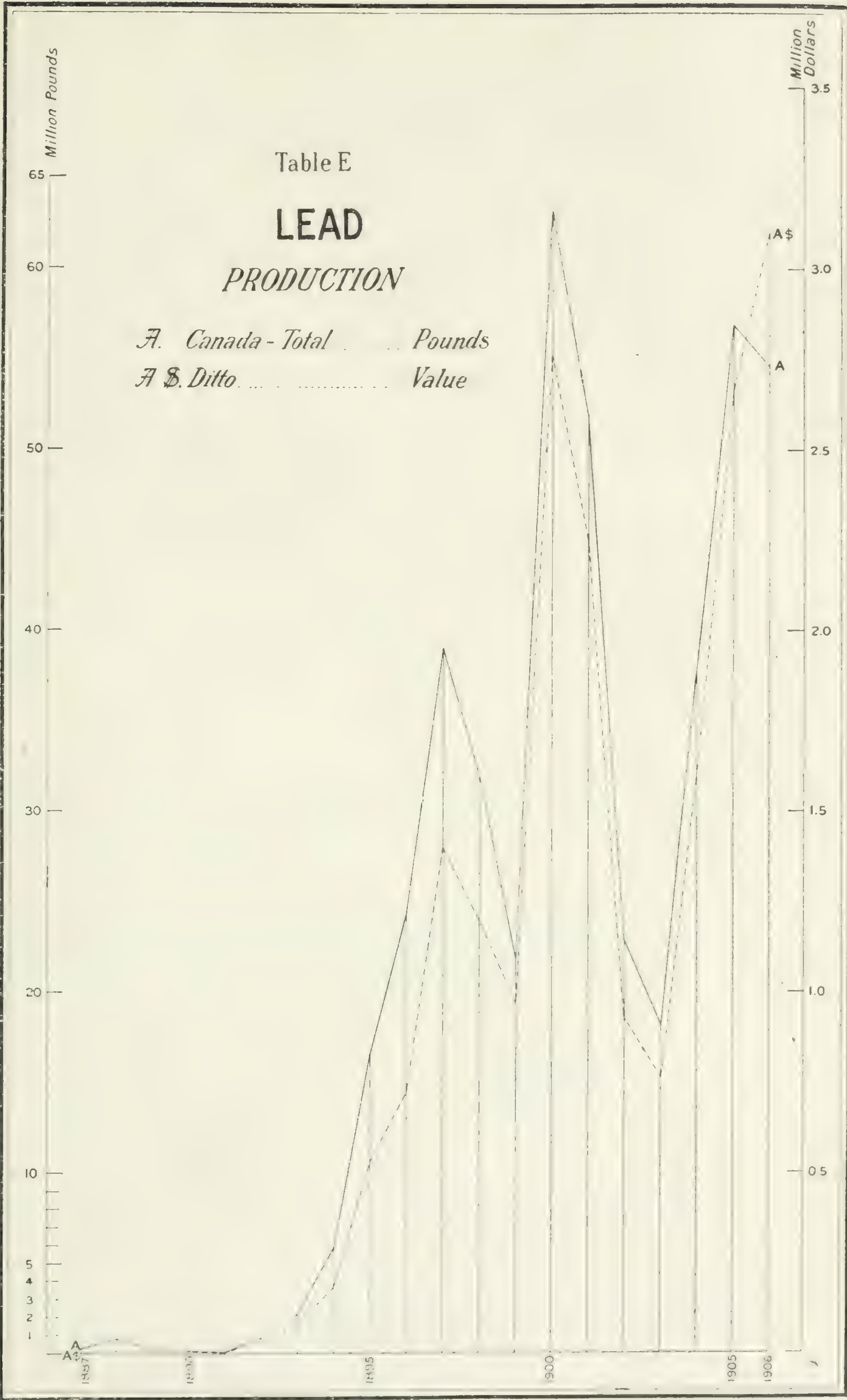
LEAD.

The total production of lead in Canada in 1906 was 54,608,217 pounds, valued at \$3,089,187 or 5.657 cents per pound, the final New York value of refined lead. Compared with the previous year the production in 1906 shows a slight falling off, the decrease being 2,256,698 pounds or about 3.9 per cent. Although a small amount of lead is annually mined in Ontario, the great bulk of the output has been derived from the silver lead ores of East and West Kootenay, British Columbia. The lead industry has by no means enjoyed continuous prosperity. A maximum output was reached in 1900, with a production of 63,169,821 pounds; in 1903 the output had diminished to 18,139,283 pounds, though in the following years a rapid increase again occurred.

In 1901, and again in 1903, the Dominion Government, to encourage the lead industry, authorized the payment of a bounty on the production of lead. The act of 1903 provided for the payment under certain restrictions of seventy-five cents per hundred pounds on lead contained in ore mined in Canada, provided that when the standard price of pig lead in London, England, exceeds twelve pounds ten shillings per ton of 2240 pounds, such bounty shall be reduced proportionately by the amount of such excess. Thus, when the price of lead in London rises to £16 or over per long ton, the bounty ceases. As the price of lead exceeded £16 sterling on the London market for a considerable period during 1906, the total amount of bounty paid was only \$40,541, as compared with \$334,224 in 1905.

The average monthly price of lead on the New York market during 1906 was 5.657 cents per pound, as compared with 4.707 cents in 1905, or an increase of 0.950 cents or 20 per cent.

The following is a statement of the average monthly prices of lead during 1906 as published by the Engineering and Mining Journal of New York :—



SESSIONAL PAPER No. 26b

MONTHLY AVERAGE PRICE OF LEAD DURING 1906 IN NEW YORK.

Month.	Cents per Pound.	Month.	Cents per Pound.
January.....	5.600	July.....	5.750
February.	5.464	August.....	5.750
March.....	5.350	September.....	5.750
April.....	5.404	October.....	5.750
May.....	5.685	November.....	5.750
June.....	5.750	December.....	5.900
		Average for the year....	5.657

The monthly average prices of soft lead in London, England—as published by Julius Matton of London, and Metallgesellschaft of Frankfurt—were, during 1906, as follows :—

MONTHLY AVERAGE PRICES OF SOFT LEAD DURING 1906 IN LONDON, ENG.

January..	£16 17 6	July.....	£16 11 7
February.....	16 0 3	August.....	17 1 3
March.....	15 17 8	September.....	18 4 4
April.....	15 16 6	October.....	19 7 9
May..	16 13 6	November.....	19 5 6
June.....	16 15 6	December.....	19 12 6
		Average for the year....	£17 7 0

Previous to 1904 lead ores mined in Canada were either exported or were reduced in Canadian furnaces to lead bullion carrying gold, silver, etc., which product was then exported for further treatment.

A lead refinery, however, is now being operated at Trail, B.C., by the Consolated Mining and Smelting Company of Canada, producing pig lead, lead pipe, sheet lead, etc., of exceptional purity. The production of refined lead by this firm has been as follows :—

Year.	Refined Lead produced.
1904.....	7,519,440 pounds
1905.....	15,804,509 "
1906.....	20,471,314 "

Thus in 1906 a little over 37 per cent of the output was refined in Canada, as compared with 27 per cent in 1905 and 20 per cent in 1904.

The Carter White Lead Co., of Canada, Ltd., manufacturers of white lead at Montreal, use Trail lead exclusively. Their plant is equipped for an immediate capacity of 7,000 tons per annum ; but is designed for an ultimate capacity of 15,000 tons.

TABLE 1.
LEAD.
ANNUAL PRODUCTION.

Calendar Year.	Pounds.	Price per Pound.	Value.
		cts.	
1887.....	204,800	4.50	\$ 9,216
1888.....	674,500	4.42	29,812
1889.....	165,100	3.93	6,488
1890.....	105,000	4.48	4,704
1891.....	88,665	4.35	3,857
1892.....	808,420	4.09	33,064
1893.....	2,135,023	3.73	79,636
1894.....	5,703,222	3.29	187,636
1895.....	16,461,794	3.23	531,716
1896.....	24,199,977	2.98	721,159
1897.....	39,018,219	3.58	1,396,853
1898.....	31,915,319	3.78	1,206,399
1899.....	21,862,436	4.47	977,250
1900.....	63,169,821	4.37	2,760,521
1901.....	51,900,958	4.334	2,249,387
1902.....	22,956,381	4.069	934,095
1903.....	18,139,283	4.237	768,562
1904.....	37,531,244	4.309	1,617,221
1905.....	56,864,915	4.707	2,676,632
1906.....	54,608,217	5.657	3,089,187

EXPORTS AND IMPORTS:—According to Customs Department statistics exports of lead during 1906 were as follows :—

	Pounds.	Value.
Lead in ore, etc.	18,140,671	\$622,101
Pig Lead.....	3,295,351	113,906
Total.....	21,436,022	\$736,007

Lead in ore was exported chiefly to the United States, while the pig lead exported was shipped principally to Japan, China, and Australia.

Imports of lead in the shape of old, scrap, pig, block, bars, and sheets amounted to 4,941 tons ; tea lead nearly 1,000 tons, manufactures of lead (quantity not stated) valued at \$75,619 ; litharge, which is about 92 per cent lead, 508 tons, and 5,206 tons of white and red lead, etc., or a total of a little over 11,500 tons ; besides \$75,619 worth of manufactured lead products.

SESSIONAL PAPER No. 26b

TABLE 2.

LEAD.

EXPORTS.

Calendar Year.	Value.
1873	81,993
1874	127
1875	7,510
1876	66
1877	720
1878	
1879	230
1880	
1881	
1882	32
1883	5
1884	36
1885	
1886	
1887	724
1888	18
1889	
1890	
1891	5,000
1892	2,509
1893	3,099
1894	144,509
1895	435,071
1896	462,095
1897	925,144
1898	885,485
1899	466,950
1900	1,917,690
1901	1,804,687
1902	457,170
1903	426,466
1904	559,461
1905	1,046,541
1906	736,007

TABLE 3.

LEAD.

IMPORTS OF LEAD.

Fiscal Year.	OLD, SCRAP AND PIG.		BARS, BLOCKS, • SHEETS.		TOTAL.	
	Cwt.	Value.	Cwt.	Value.	Cwt.	Value.
1880					30,298	\$124,117
1881	16,236	\$ 56,919	18,222	\$70,744	34,458	127,663
1882	36,655	120,870	10,540	35,728	47,195	156,598
1883	48,780	148,759	8,591	28,785	57,371	177,544
1884	39,409	103,413	9,704	28,458	49,113	131,871
1885	36,106	87,038	9,362	24,396	45,468	111,434
1886	39,945	110,947	9,793	28,948	49,738	139,895
1887	61,160	173,477	14,153	41,746	75,313	215,223
1888	68,678	196,845	14,957	45,900	83,635	242,745
1889	74,223	213,132	14,173	43,482	88,396	256,614
1890	101,197	283,096	19,083	59,484	120,280	342,580
1891	86,382	243,033	15,646	48,220	102,028	291,253
1892	97,375	254,384	11,299	32,368	108,674	286,752
1893	94,485	215,521	12,403	32,286	106,888	247,807
1894	70,223	149,440	8,486	20,451	78,709	169,891
1895	67,261	139,290	6,739	16,315	74,000	155,605
1896	72,433	173,162	8,575	23,169	81,008	196,331
1897	65,279	158,381	10,516	29,175	75,795	187,556
	OLD, SCRAP, PIG AND BLOCK.*		BARS AND SHEETS.†		TOTAL.	
1898	88,420	\$260,779	22,214	\$39,041	110,634	\$299,820
1899	114,659	283,432	44,796	39,833	159,455	323,265
1900	62,361	207,819	15,493	53,506	77,854	251,325
1901	(a) 85,321	97,011	16,295	78,316	101,616	175,327
1902	(a) 122,279	104,672	18,596	49,261	140,875	153,933
1903	(a) 98,530	67,821	11,535	35,398	110,065	103,219
1904	(a) 94,602	121,165	14,102	39,644	108,704	160,809
1905	(a) 57,074	133,775	17,792	51,972	74,866	185,747
1906	82,729	271,105	16,106	57,185	98,835	328,290

* Duty 15 per cent.

† Duty 25 per cent.

(a) Includes Canadian lead ore sent to the United States for refining, imported at price of refining only.

TABLE 4.
LEAD.
IMPORTS OF LEAD MANUFACTURES.

Fiscal Year.	Value.	Fiscal Year.	Value.	
1880..	\$ 15,400	1893	\$ 33,783	
1881..	22,629	1894..	29,361	
1882..	17,282	1895..	38,015	
1883..	25,556	1896..	50,722	
1884..	31,361	1897..	60,735	
1885..	36,340	1898..	63,179	
1886..	33,078	1899..	91,497	
1887..	19,140	1900..	194,736	
1888..	18,816	1901..	107,260	
1889..	16,315	1902..	120,020	
1890..	25,600	1903..	134,151	
1891..	23,893	1904..	129,093	
1892..	22,636	1905.	147,177	
		Duty.	Cwt.	
1906 {	Lead Tea	Free.	19,050	\$ 79,886
	" Pipe	35 p. c.	877	5,417
	" Shot and bullets	35 "	728	2,871
	Manufactures, N.E.S.	30 "		75,619
Total.				\$163,793

TABLE 5.
LEAD.
IMPORTS OF LITHARGE.

Fiscal Year.	Cwt.	Value.	Fiscal Year.	Cwt.	Value.
1880.....	3,041	\$14,334	1894.....	38,547	\$28,685
1881.....	6,126	22,129	1895.....	11,955	32,953
1882.....	4,900	16,651	1896.....	10,710	32,817
1883.....	1,532	6,173	1897.....	12,028	34,538
1884.....	5,235	18,132	1898.....	11,446	32,904
1885.....	4,990	16,156	1899.....	9,530	32,518
1886.....	4,928	16,003	1900.....	9,139	29,176
1887.....	6,397	21,865	1901.....	11,132	51,944
1888.....	7,010	23,808	1902.....	13,002	47,021
1889.....	8,089	31,082	1903.....	13,921	47,761
1890.....	9,453	31,401	1904.....	9,894	32,633
1891.....	7,979	27,613	1905.....	17,865	57,736
1892.....	10,384	34,343	1906.. Duty free..	10,165	39,836
1893.....	7,685	24,401			

TABLE 6.

LEAD.

IMPORTS OF DRY WHITE AND RED LEAD AND ORANGE MINERAL.

	Fiscal Year.	Pounds.	Value.
a	1885.....	5,404,753	\$ 198,913
	1886.. ..	6,703,077	213,258
	1887.....	6,998,820	233,725
	1888.. ..	6,361,334	216,654
	1889.....	7,066,465	267,236
	1890.....	10,859,672	381,959
	1891.. ..	8,560,615	337,407
	1892.....	10,288,766	351,686
	1893.....	10,865,183	364,680
	1894.....	10,958,170	353,053
b	1895.. ..	8,780,052	282,353
	1896	11,711,496	367,569
	1897.....	10,310,463	347,539
	1898	12,682,808	448,659
	1899.....	14,507,945	514,842
	1900.....	14,679,920	634,492
	1901.....	10,241,601	461,368
	1902	15,584,164	603,582
	1903.. ..	19,208,786	758,371
	1904	16,925,585	662,098
(c)	1905..... Duty 5 per cent.	17,376,588	638,381

	Duty.	Pounds.	Value.
1906 {	White lead, dry.....	30 % 8,248,057	\$336,142
	" " ground in oil... ..	35 % 270,920	12,533
	Red lead and orange mineral...	5 1,893,914	68,769
Total.		10,412,891	417,444

(a) Imports of dry white and red lead and orange mineral.
(b) Imports of dry white and red lead, orange mineral and zinc white.
(c) Imports of dry white and red lead.

British Columbia :—Statistics of lead production in British Columbia, comprising the greater part of the output in Canada, are given separately in table 7, while the details by districts for the past four years are given in table 8. The largest production recorded for one year was in 1900, and the second largest in 1905. The production in 1906 was less than the production in 1905 by about 7·3 per cent.

TABLE 7.
LEAD.
BRITISH COLUMBIA :—PRODUCTION.

Calendar Year.	Pounds.	Price per Pound.	Value.
		cts.	
1887.....	204,800	1·50	\$ 9,216
1888.....	674,500	4·42	29,813
1889.....	165,100	3·93	6,488
1890.....	Nil.	...	...
1891.....	"	...	...
1892.....	808,420	4·09	33,064
1893.....	2,131,092	3·73	79,490
1894.....	5,703,222	3·29	187,636
1895.....	16,461,794	3·23	531,716
1896.....	24,199,977	2·98	721,159
1897.....	38,841,135	3·58	1,390,513
1898.....	31,693,559	3·78	1,198,017
1899.....	21,862,436	4·47	977,250
1900.....	63,158,621	4·37	2,760,031
1901.....	51,582,906	4·334	2,235,603
1902.....	22,536,381	4·069	917,005
1903.....	18,089,283	4·237	766,443
1904.....	36,646,244	4·309	1,579,086
1905.....	56,580,703	4·707	2,663,254
1906.....	52,408,217	5·657	2,964,733

TABLE 8.
LEAD.
BRITISH COLUMBIA :—PRODUCTION BY DISTRICTS.

	1903.	1904.	1905.	1906.
	Pounds.	Pounds.	Pounds.	Pounds.
Cassiar.....			5,500	
East Kootenay				
Fort Steele.....	717,479	21,071,236	48,248,828	44,487,481
Other districts.....	951,296	401,022	149,584	167,691
West Kootenay.....	4,299,727	3,091,648	1,002,114	3,173,353
Ainsworth.....	1,072,542	976,570	1,368,388	1,034,553
Nelson.....	9,880,469	10,611,227	5,399,330	2,975,674
Slocan.....	1,144,239	485,520	339,883	469,006
Other districts.....	23,531	9,021	67,076	100,465
Yale.....	18,089,283	36,646,244	56,580,703	52,408,217

NICKEL.

The production of nickel from the ores of the Sudbury district in Ontario has made a very rapid growth during the past two years, the output in 1906 being over twice that of 1904. The ore is smelted at Copper Cliff and Victoria Mines to a matte carrying from 78 to 80 per cent of the combined metals, copper and nickel. The resulting matte is shipped to the United States and Great Britain for refining.

The quantity of nickel contained in the matte shipped during 1906 was 21,490,955 pounds, as compared with 18,876,315 pounds in 1905, or an increase of 2,614,640 pounds, or 13·851 per cent. The total amount of matte shipped was 20,310 tons, containing both nickel and copper, and was valued at the point of shipment at about \$4,628,011. The final value of the refined nickel in New York at an average of 41·64 cents per lb. would be \$8,948,834.

The following were the aggregate results of operations on the nickel-copper deposits of Ontario in 1906 :—

	Tons of 2,000 lbs.
Ore mined.....	343,814
Ore smelted	340,059
Matte produced.....	20,364
Matte shipped.....	20,310
Copper contents of matte shipped.....	5,264
Nickel contents of matte shipped.....	10,745
Spot value of matte shipped.....	\$4,628,011

According to customs returns, exports of nickel in matte, etc., were for twelve months ending December 31, as follows :—

	Pounds.
To Great Britain.....	2,716,892
To United States.....	17,936,953
	<hr/>
	20,653,845

During 1905 the price of refined nickel remained fairly steady throughout the year; according to the "Engineering and Mining Journal" of New York, quotations for large lots, New York or other parallel delivery, were 40 to 47 cents per pound, according to size and condition of order. For small quantities prices ranged from 48 to 60 cents, also according to size of order and delivery.

In 1906 the price of refined nickel, according to the same monthly, remained fairly steady from January to September 8, quotations for



SESSIONAL PAPER No. 26b

large lots, New York delivery, being from 40 to 45 cents per pound. From September 1 to the end of the year quotations were from 45 to 50 cents per pound according to size and condition of order, while for small quantities prices were from 50 to 65 cents per pound.

Although nickel is one of the minor constituents of the rich silver ores of the Cobalt district, statistics of the quantities of this mineral contained in these ores have not been included in the accompanying tables.

The Ontario Bureau of Mines reports the quantity of nickel contained in ore shipped from Cobalt as follows :—

Year.	Tons of Nickel.
1904	14
1905	75
1906	160

The companies engaged in mining nickel ores are as follows :

The Canadian Copper Company (The International Nickel Co.) Copper Cliff, Ont., and New York.

The Mond Nickel Company, Victoria Mines, Ont., and London, Eng.

The Lake Superior Power Company, (The Lake Superior Corporation) Sault Ste Marie, Ont.

The latter Company did not operate their nickel mines during the year.

TABLE 1.
NICKEL.
ANNUAL PRODUCTION.

Calendar Year.	Pounds of Nickel in Matte.	Final Average Market Price per lb at New York.	Value.
1889.....	*830,477	60c.	\$ 498,286
1890.....	1,435,742	65c.	933,232
1891.....	4,035,347	60c.	2,421,208
1892.....	2,413,717	58c.	1,399,956
1893.....	3,982,982	52c.	2,071,151
1894.....	4,907,430	38½c.	1,870,958
1895.....	3,888,525	35c.	1,360,984
1896.....	3,397,113	35c.	1,188,990
1897.....	3,997,647	35c.	1,399,176
1898.....	5,517,690	33c.	1,820,838
1899.....	5,744,000	36c.	2,067,840
1900.....	7,080,227	47c.	3,327,707
1901.....	9,189,047	50c.	4,594,523
1902.....	10,693,410	47c.	5,025,903
1903.....	12,505,510	40c.	5,002,204
1904.....	10,547,883	40c.	4,219,153
1905.....	18,876,315	40c.	7,550,526
1906.....	21,490,955	41.64	8,948,834

Calculated from shipments made by rail.

TABLE 2.

NICKEL.

EXPORTS.

Calendar year.	Value.	Calendar Year.	Value.
1890.....	\$ 89,568	1899.....	\$939,915
1891.....	667,280	1900.....	1,031,030
1892.....	293,149	1901.....	751,080
1893.....	629,692	1902.....	1,007,211
1894.....	559,356	1903.....	1,116,099
1895.....	521,783	1904.....	1,091,349
1896.....	658,213	1905.....	1,569,693
1897.....	723,130	1906.....	2,042,065
1898.....	1,019,363		

*Practically all the nickel-bearing ore and matte produced in Canada is exported, the apparent discrepancy between tables Nos. 1 and 2 being due to the different basis of valuation adopted in the two instances. Table 1 represents the total final values of the nickel produced in Canada, for the years represented. In table 2 the worth of the product shipped is entered at its spot value to the operators, and depends upon the particular stage to which they happen to carry the process of extraction at the time, *e.g.*, whether the shipments made are raw ore, low grade matte or high grade matte, etc.

TABLE 3.

NICKEL.

IMPORTS.

Calendar Year.		Value.
1890		\$ 3,154
1891.....		3,889
1892.....		3,208
1893.....		2,905
1894.....		3,528
1895.....		4,267
1896.....		4,787
1897.....		4,737
1898.....		5,882
1899.....		9,449
1900		6,988
1901.....		12,029
1902.....		15,448
1903.....		26,177
1904.....		14,682
1905.....		19,076
		Duty.
1906	{ Nickel anodes	10 p. c.
	{ Nickel*	Free.
		\$ 15,976

*Classified under the general heading of minerals in the Trade and Navigation Report.

ZINC.

The zinc smelting plant erected at Frank, Alberta, by the Canadian Metal Company, Ltd., has not yet been put into commercial operation, and there is as yet no production of spelter in Canada.

Small amounts of zinc ore and concentrates were shipped both from Ontario and British Columbia, the total being 1,154 tons, valued at \$23,800.

The production in Ontario was derived from the Richardson mine in the township of Olden, Frontenac county.

For British Columbia the Provincial Mineralogist reports in the Minister of Mines report as follows :

“The production of zinc ore this past year was very small, only some 654 tons, and the industry has been practically at a stand still. In 1905, concentrating or “enriching” plants were erected for the production of concentrates that would assay about 50 per cent zinc, for which there was a market in the United States, into which country they were admitted free of duty as “crude mineral”; but in 1906 a decision of the United States Customs Department ruled that these concentrates were not “crude mineral” and, consequently, were subject to duty, which duty was so high as to be prohibitive, the result being a suspension of zinc mining in British Columbia. This decision has, however, been appealed from, and on February 7, 1907, the United States General Appraisers reversed the decision, deciding that these concentrates were “crude mineral” and, consequently, free from duty.”

TABLE 1.
ZINC.
ANNUAL PRODUCTION OF ZINC.

Calendar Year.	Zinc Ore Shipped		Metallic Zinc in Ore Shipped.	
	Tons.	Spot Value.	Pounds.	Final Value.
1898.....	1,162	\$ 11,000	788,000	\$ 56,011
1899.....	865	18,165	814,000	46,805
1900.....	261	4,810	212,000	9,342
1901.....				
1902.....	158	1,659	142,200	6,882
1903.....	1,000	10,500	900,000	48,660
1904.....	597	3,700	477,568	24,356
1905.....	9,413	139,200		
1906.....	1,154	23,800		*

* Figures not available.

TABLE 2.

ZINC.

IMPORTS OF ZINC IN BLOCKS, PIGS AND SHEETS.

Fiscal Year.	Cwt.	Value.	Fiscal Year.	Cwt.	Value.
1880.....	13,805	\$67,881	1894.....	20,774	\$90,680
1881.....	20,920	94,015	1895.....	15,061	63,373
1882.....	15,021	76,631	1896.....	20,223	80,784
1883.....	22,765	94,799	1897.....	11,946	57,754
1884.....	18,945	77,373	1898.....	35,148	112,785
1885.....	20,954	70,598	1899.....	18,785	107,477
1886.....	23,146	85,599	1900.....	28,748	156,167
1887.....	26,142	98,557	1901.....	20,527	103,457
1888.....	16,407	65,827	1902.....	34,871	141,560
1889.....	19,782	83,935	1903.....	26,646	142,827
1890.....	18,236	92,530	1904.....	25,553	138,057
1891.....	17,984	105,023	1905.....	25,141	141,514
1892.....	21,881	127,302	1906 Duty free	24,462	158,438
1893.....	26,446	124,360			

TABLE 3.

ZINC.

IMPORTS OF SPELTER.

Fiscal Year.	Cwt.	Value.	Fiscal Year.	Cwt.	Value.
1880.....	1,073	\$5,310	1894.....	8,423	\$35,615
1881.....	2,904	12,276	1895.....	9,249	30,245
1882.....	1,654	7,779	1896.....	10,897	40,548
1883.....	1,274	5,196	1897.....	8,342	32,826
1884.....	2,239	10,417	1898.....	2,794	13,561
1885.....	3,325	10,875	1899.....	5,450	29,687
1886.....	5,432	18,238	1900.....	5,836	29,416
1887.....	6,908	25,007	1901.....	14,621	58,283
1888.....	7,772	29,762	1902.....	18,356	80,757
1889.....	8,750	37,403	1903.....	23,159	110,817
1890.....	14,570	71,122	1904.....	33,952	164,751
1891.....	6,249	31,459	1905.....	37,941	206,244
1892.....	13,909	62,550	1906 Duty free	50,137	290,686
1893.....	10,721	49,822			

*Spelter in blocks and pigs.

SESSIONAL PAPER No. 26b

TABLE 4.

ZINC.

IMPORTS OF ZINC, MANUFACTURES OF.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$ 8,327	1893.....	7,464
1881.....	20,178	1894.....	6,193
1882.....	15,526	1895.....	5,581
1883.....	22,599	1896.....	6,290
1884.....	11,952	1897.....	5,145
1885.....	9,459	1898.....	10,503
1886.....	7,345	1899.....	14,661
1887.....	6,561	1900.....	11,475
1888.....	7,402	1901.....	6,882
1889.....	7,233	1902.....	6,683
1890.....	6,472	1903.....	9,754
1891.....	7,178	1904.....	12,682
1892.....	7,563	1905.....	11,912
		Duty.	
1906 { Zinc seamless drawn tubing.....		Free.	
" manufactures of, N.O.P.....		25 %	\$ 12,917
Total.....			\$ 12,917

MISCELLANEOUS METALLIC.

ALUMINIUM.

The Northern Aluminium Company have extensive works at Shawenegan Falls, Que., where they manufacture aluminium from ores imported from France and Germany. They have also a well equipped wire mill where the metal is made into aluminium wire and cables which are now used extensively in transmission of electricity. No Canadian raw material is used ; but it is interesting to mention the industry inasmuch as it may stimulate search and prospecting for ores of aluminium. The Northern Aluminium Company use bauxite imported from France and Germany.

ANTIMONY.

The mining of antimony ores in Canada has been exceedingly irregular, as previous to 1905 no production had been reported since 1898. In 1905 about 527 tons of ore were shipped from West Gore, Hants county, Nova Scotia, and in 1906 the shipments were 782 tons, yielding 1,031 ozs. 13 dwt. 11 grs. gold ; antimony contents not stated.

An important discovery of antimony ore was made in British Columbia and is referred to in the report of the Minister of Mines as follows :—

“The most notable discovery in the district (Slocan district) was that of a large body of stibnite in the Alps and Alturas claims, on the north fork of Carpenter creek. The ore shows in a well defined ledge four feet in width, running 65 p.c. antimony. The owners of the property, The Golden Crown Gold and Silver Mining Company, Louis Hind, M.E., manager, owing to the lateness of the season and the elevation of the mines, viz., 7,700 feet, were unable to do more than development work during the fall ; but sufficient progress was made to show that the ore body is a very extensive one. A car load of ore is now sacked on the dump and a large quantity of ore is blocked out ready for mining. The management has arranged for the construction of an aerial tramway 4,000 feet in length, and for the building of substantial quarters for a large force of men, that operations may be carried on continuously. The ore is to be sent to Scotland for treatment, and shipments will be made as soon as the tramway is installed.”

SESSIONAL PAPER No. 26b

TABLE 1.

MISCELLANEOUS.

METALLIC.

ANNUAL PRODUCTION OF ANTIMONY ORE.

Calendar Year.	Tons.	Value.
1886	665	\$31,490
1887	584	10,860
1888	345	3,696
1889	55	1,100
1890	26 $\frac{1}{2}$	625
1891	10	60
1892 to 1897	Nil.	Nil.
1898	1,344	20,000
1899 to 1904	Nil.	Nil.
1905	527	.....
1906	782	.....

* Fiscal year ending September 30.

TABLE 2.

MISCELLANEOUS.

METALLIC.

EXPORTS OF ANTIMONY ORES.

Calendar Year	Tons.	Value.	Calendar Year	Tons.	Value.
1880.....	40	\$1,948	1891.....	3 $\frac{1}{2}$	\$60
1881.....	34	3,308	1892 to 1897..	Nil.	Nil.
1882.....	323	11,673	1898.....	1,232	15,295
1883.....	165	4,200	1899.....	6 $\frac{1}{2}$	190
1884.....	483	17,875	1900.....	210	3,441
1885.....	758	36,250	1901.....	10	1,643
1886.....	665	31,490	1902.....	90	13,658
1887.....	229	9,720	1903.....	33	4,332
1888.....	352 $\frac{1}{2}$	6,894	1904.....	160	7,237
1889.....	30	695	1905.....	525	27,118
1890.....	38	1,000	1906.....	420	17,064

TABLE 3.
MISCELLANEOUS.
METALLIC.
IMPORTS OF ANTIMONY.

Fiscal Year.	Pounds.	Value.	Fiscal Year.	Pounds.	Value.
1880.....	42,247	\$ 5,903	1893.....	181,823	\$14,771
1881.....		7,060	1894.....	139,571	12,249
1882.....	183,597	15,044	1895.....	79,707	6,131
1883.....	105,346	10,355	1896.....	163,209	9,557
1884.....	445,600	15,564	1897.....	134,661	8,031
1885.....	82,012	8,182	1898.....	156,451	12,350
1886.....	89,787	6,951	1899.....	289,066	16,851
1887.....	87,827	7,122	1900.....	186,997	20,001
1888.....	120,125	12,242	1901.....	350,737	24,714
1889.....	119,034	11,206	1902.....	504,822	39,276
1890.....	117,066	17,439	1903.....	868,146	65,434
1891.....	114,084	17,483	1904.....	418,943	27,112
1892.....	180,308	17,680	1905.....	186,454	12,828
1906 { Antimony, or regulus of, not ground, pulverized or otherwise manufactured. Antimony salts.....			Duty.		
			Free.	316,278	42,517
			"	87,640	13,780
Total.....				403,918	56,297

MERCURY.

There has been no production of mercury since 1897. The small production reported in 1895, 1896 and 1897, was derived from the deposits at the western end of Kamloops lake, B.C. These deposits consist of quartz veins containing pockets of cinnabar. These veins are in a zone of decomposed volcanic rock of Tertiary age.

TABLE 4.
MISCELLANEOUS.
METALLIC.
PRODUCTION OF MERCURY.

Calendar Year.	Flasks (76½ lb.)	Price per flask.	Value.
1895.....	71	\$ 33 00	\$ 2,343
1896.....	58	33 44	1,940
1897.....	9	36 00	324

TABLE 5.
MISCELLANEOUS.
METALLIC.
IMPORTS OF MERCURY.

Fiscal Year.	Pounds.	Value.
1882.	2,443	\$ 965
1883.	7,410	2,991
1884.	5,848	2,441
1885.	14,490	4,781
1886.	13,316	7,142
1887.	18,409	10,618
1888.	27,951	14,943
1889.	22,931	11,844
1890.	15,912	7,677
1891.	29,775	20,223
1892.	30,936	15,038
1893.	50,711	22,998
1894.	36,914	14,483
1895.	63,732	25,703
1896.	77,869	32,343
1897.	76,058	33,534
1898.	59,759	36,425
1899.	103,017	51,695
1900.	85,342	51,987
1901.	140,610	94,564
1902.	97,283	56,615
1903.	164,968	91,625
1904.	151,107	80,658
1905.	103,330	48,412
1906. Duty free.	150,364	69,505

PLATINUM.

The chief source of the platinum production in Canada has been the placer gravels of British Columbia, principally in the Similkameen River district. The nickel-copper ores of the Sudbury district also carry small quantities of the metals of the platinum group, and these are now being partly recovered. During 1902, 1903, and 1904 considerable quantities of platinum were recovered from accumulated residues resulting from the treatment of the mattes from Sudbury.

In 1906 there was practically no production of platinum from placer deposits, while the amount of platinum metals recovered from the treatment of the nickel-copper mattes is reported by the Ontario Bureau of Mines to have been 314 ounces valued at \$5,652. This has been tabulated under palladium.

In British Columbia the Provincial Mineralogist reports that "Platinum continues to be found in small quantities in various parts of the Province, but as yet no systematic attempt has been made to save it. As already noted in previous reports, it is found in alluvial wash-

ings in the Similkameen district, on the Quesnel river in Cariboo, on Thibert creek in Cassiar, and also in the Yukon. The latest find was at Lillooet, from which district there was received a few ounces of the crude platinum sand, saved by a prospector in washing for gold, for which the Provincial Mineralogist was able to obtain some \$25 an ounce net cash."

TABLE 6.
MISCELLANEOUS.
METALLIC.

ANNUAL PRODUCTION OF PLATINUM.

Calendar Year.	Value.	Calendar Year.	Value.
1887.....	\$ 5,600	1897... ..	\$ 1,600
1888.. ..	6,000	1898.....	1,500
1889.....	3,500	1899.. ..	825
1890... ..	4,500	1900.. .	Nil.
1891.....	10,000	1901.....	457
1892.....	3,500	1902.....	46,502
1893.. .	1,800	1903 . .	33,345
1894.. ..	950	1904. . .	10,872
1895.....	3,800	1905.....	500
1896.....	750	1906.....	*

* See under Palladium.

TABLE 7.
MISCELLANEOUS.
METALLIC.

IMPORTS OF PLATINUM.

Fiscal Year.	Value.	Fiscal Year.	Value.
1883.....	\$ 113	1895.. ..	\$3,937
1884.....	576	1896.....	6,185
1885.....	792	1897.. ..	9,031
1886.....	1,154	1898.....	9,781
1887.....	1,422	1899.....	9,671
1888.....	13,475	1900.....	57,910
1889.....	3,167	1901.....	20,263
1890.....	5,215	1902.....	19,357
1891.....	4,055	1903.	21,251
1892.. ..	1,952	1904.....	28,112
1893.....	14,082	1905... ..	61,719
1894.. ..	7,151	1906*.. ..	54,494

* Platinum wire and platinum in bars, strips, sheets or plates, platinum retorts, pans, condensers, tubing and pipe, imported by manufacturers of sulphuric acid for use in their works. Duty free.

PALLADIUM,

It has been known for a long time that palladium was present in the nickel ore of the Sudbury district, but in past years no definite information could be obtained as to whether the metals of the platinum group were saved in the treatment which the ores and mattes underwent. As far back as 1889 it was discovered that sperrylite, the arsenide of platinum, which is present in the Sudbury ores, contained traces of palladium, but the occurrence was noted as being only of mineralogical interest. Of late years, however, the sources of platinum have not been able to supply the demand, and palladium is being considered as a possible substitute on account of its malleability and high melting point (palladium 1500°C, platinum 1750°C).

The metal palladium, as well as platinum, as already explained, has been recovered from the residues resulting from the treatment of the nickel-copper ores of Sudbury, Ont., and statistics of production as obtained by the Ontario Bureau of Mines have been as follows:—

	Ounces.	Value.
1902 Palladium.	4,411	\$86,014
1903 "	3,177	61,952
1904 "	952	18,564
1905 Metals of the Platinum Group.. ..	1,562	28,116
1906 " " "	314	5,652

TIN.

Tin ores have not yet been found in sufficient quantities in Canada to be of economic importance.

The occurrence of tin has been reported from several localities, the most important, perhaps, being the recent discovery of cassiterite near New Ross, Lunenburg county, Nova Scotia. This occurrence has not yet been found of economic value. It has been visited by several officers of the Geological Survey, and reports upon it may be found in the Summary Report of the Geological Survey Branch of the Department of Mines for 1907, pages 77 and 80 to 83.

The imports of tin and manufactures of, into Canada, are shown in the following table:—

TABLE 8.

MISCELLANEOUS.

METALLIC.

IMPORTS OF TIN AND TINWARE.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$ 281,880	1893.	\$1,242,994
1881.....	413,924	1894.....	1,310,389
1882.....	790,285	1895.....	973,397
1883.....	1,274,150	1896.....	1,237,684
1884.....	1,018,493	1897.....	1,274,108
1885.....	1,060,883	1898.....	1,550,851
1886.....	1,117,368	1899.....	1,372,813
1887.....	1,187,312	1900.....	2,418,455
1888.....	1,164,273	1901.....	2,339,109
1889.....	1,243,794	1902.....	2,293,958
1890.....	1,289,756	1903.....	2,712,186
1891.....	1,206,918	1904.....	2,389,557
1892.....	1,594,205	1905.....	2,791,757
		Duty.	
1906 {	Tin crystals.....	Free.	\$ 2,634
	Tin in blocks, pigs and bars.....	"	1,171,569
	Tin plates and sheets.....	"	1,869,000
	Tin foil	"	65,307
	Tinware, plain, japanned, or lithographed, and all manufactures of tin, N.E.S.	25	228,438
Total			3,336,948

NON-METALLIC.

Abrasive Materials.

The abrasives produced in Canada comprise corundum, the various sandstone abrasives, such as grindstones, pulpstones, whetstones, etc., and tripolite or infusorial earth.

CORUNDUM.

The total shipments of grain corundum in 1906 from mills in Canada were 2,274 tons, valued at \$204,973, f. o. b. at railway shipping points. Compared with the shipments in 1905 there is an increase of 630 tons, or over 38 per cent.

Detailed statistics of output and sales for 1906 were as follows :—

Rock treated.....	45,719 tons.
Grain corundum graded.....	5,828,905 pounds.
Shipments :—	
Grain corundum sold in Canada	323,103 pounds.
Grain corundum sold in other countries.....	4,225,073 "
Total sales.	4,548,176

Two companies were mining corundum rock and operating mills during the year. The Canada Corundum Company, Ltd., Toronto, the largest operator, worked the Craig mine at Craigmont, Renfrew county, and the Ashland Emery and Corundum Company operated their mine and mill at Burgess Mines, in the same district. Both companies worked throughout the year, employing about 232 men and paying in wages \$160,354.

Statistics of shipments since 1900 are as follows :—

	Quantity.	Value.
1900 grain corundum.....	3 tons.	\$ 300
1901 "	387 "	46,415
1902 "	768 "	84,465
1903 " 703 l	970 "	80,180
corundum ore 267 f	993 "	109,545
1904 grain corundum	1644 "	149,153
1905 "	2274 "	204,973
1906 "		

Statistics since 1900 showing the quantities of ore treated, the corundum produced, and the sales or shipments, are given in the following table :—

TABLE 1.

ABRASIVE MATERIALS.

PRODUCTION OF CORUNDUM ORE AND CORUNDUM.

Calendar Year.	Corundum-bearing rock treated.	Grain Corundum Graded.	Grain Corundum sold in Canada.	Grain Corundum Exported.	Total of Grain Corundum
	Tons.	Tons.	Tons.	Tons.	Tons.
1900.....		60			3
1901.....	4,134	434	85	302	387
1902.....	7,996	805	106	662	768
1903..... (a)	8,877	839	85	618	703
1904.....	28,187	1,654	116	877	993
1905.....	23,570	1,680	140	1,504	1,644
1906.....	45,719	2,914	162	2,112	2,274

(a) In addition to this amount which was milled in Canada, 267 tons of ore were mined and shipped to the United States for treatment there.

GRINDSTONES, PULPSTONES, ETC.

The production of grindstones has been carried on for many years in the Province of Nova Scotia. The output to-day is practically the same as it was about 20 years ago, there having been comparatively little variation from year to year. The total production, including wood-pulpstones, etc., in 1906, was 5,363 tons, valued at \$59,814.

These abrasives are quarried from the Millstone-grit of the Carboniferous formation, which occupies a large portion of the surface of the eastern half of the Province of New Brunswick, and the northern and north-western parts of Nova Scotia.

The grindstones are all shipped in a finished condition, and are worth from \$10 to \$12 per ton. About 20 pulpstones were made in 1906, which found a market in Canadian and United States pulp mills. Scythe or whetstones are manufactured by one firm. These are put up in one-quarter gross boxes, thirty pounds to the box, and are worth about \$50 per ton; about 300 gross were made in 1906. At some of the quarries there is a considerable production of foundation and building stone, besides rough stone for breakwater and harbour works.

Statistics of the production by provinces since 1886 are given in table 2 following :—

TABLE 2.

ABRASIVE MATERIALS.

ANNUAL PRODUCTION OF GRINDSTONES.

CALENDAR YEAR.	NOVA SCOTIA.		New BRUNSWICK.		TOTAL.		AVERAGE VALUE PER TON.
	Tons.	Value.	Tons.	Value.	Tons.	Value.	
1886.....	1,765	\$24,050	2,255	\$22,495	4,020	\$46,545	\$11 58
1887.....	1,710	25,020	3,582	38,988	5,292	64,008	12 10
1888.....	1,971	20,400	3,793	30,729	5,764	51,129	8 87
1889.....	712	7,128	2,692	23,735	3,404	30,863	9 07
1890.....	850	8,536	4,034	33,804	4,884	42,340	8 67
1891.....	1,980	19,800	2,499	22,787	4,479	42,587	9 51
1892.....	2,462	27,610	2,821	23,577	5,283	51,187	9 69
1893.....	2,112	21,000	2,488	17,379	4,600	38,379	8 34
1894.....	2,128	16,000	1,629	16,717	3,757	32,717	8 71
1895.....	1,400	14,000	2,075	17,932	3,475	31,932	9 19
1896.....	1,450	14,500	2,263	18,810	3,713	33,310	8 97
1897.....	1,407	17,500	3,165	24,840	4,572	42,340	9 26
1898.....	1,422	12,350	3,513	32,425	4,935	44,775	9 07
1899.....	1,378	10,300	3,133	32,965	4,511	43,265	9 59
1900.....	1,411	12,600	4,128	40,850	5,539	53,450	9 65
1901.....	358	3,200	4,223	42,490	4,581	45,690	9 97
1902.....	1,074	8,118	3,559	36,000	4,633	44,118	9 52
1903.....	1,337	9,562	4,201	38,740	5,538	48,302	8 72
1904.....	1,029	7,332	3,620	35,450	4,649	42,782	9 20
1905.....	1,020	10,200	4,520	52,175	5,540	62,375	11 25
1906.....	1,023	9,680	4,340	50,134	5,363	59,814	11 15

The imports of grindstones into Canada, principally into the Provinces of Ontario and Quebec, reached a total in 1906 of \$59,627, made up of grindstone not mounted and not less than three feet in diameter to the value of \$48,683, and other grindstones to the value of \$10,944.

Statistics of the exports of grindstones and of the imports of grindstones, burrstones, emery and pumice stone are shown in tables 3, 4, 5, 6, and 7 following.

TABLE 3.

ABRASIVE MATERIALS.

EXPORTS OF GRINDSTONES.

Calendar Year.	Value.
1884.....	\$28,186
1885.....	22,606
1886.....	24,185
1887.....	28,769
1888.....	28,176
1889.....	29,982
1890.....	18,564
1891.....	28,433
1892.....	23,567
1893.....	21,672
1894.....	12,579
1895.....	16,723
1896.....	19,139
1897.....	18,807
1898*.....	25,588
1899*.....	23,288
1900*.....	42,128
1901*.....	29,130
1902*.....	24,489
1903*.....	27,659
1904*.....	35,612
1905*.....	24,868
1906*.....	31,978

* Including stone for the manufacture of grindstones.

TABLE 4.
ABRASIVE MATERIAL.
IMPORTS OF GRINDSTONE.

Fiscal Year.	Duty.	Tons.	Value.
1880.....	1,044	\$11,714
1881.....	1,359	16,895
1882.....	2,098	30,654
1883.....	2,108	31,456
1884.....	2,074	30,471
1885.....	1,148	16,065
1886.....	964	12,803
1887.....	1,309	14,815
1888.....	1,721	18,263
1889.....	2,116	25,564
1890.....	1,567	20,569
1891.....	1,381	16,991
1892.....	1,484	19,761
1893.....	1,682	20,987
1894.....	1,918	24,426
1895.....	1,770	22,834
1896.....	1,862	26,561
1897.....	1,521	25,547
1898.....	22,217
1899.....	27,476
1900.....	34,382
1901.....	39,068
1902.....	40,838
1903.....	53,388
1904.....	46,039
1905.....	49,747
1906 {	Grindstones not mounted and not less than 36 inches in diameter....		15 p. c. 48,683
	Grindstones N.E.S.....		25 p. c. 10,944
			59,627

TABLE 5.
ABRASIVE MATERIAL.
IMPORTS OF BURRSTONES.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$12,049	1893.....	\$ 3,552
1881.....	6,337	1894.....	3,029
1882.....	15,143	1895.....	2,172
1883.....	13,242	1896.....	2,049
1884.....	5,365	1897.....	1,827
1885.....	4,517	1898.....	1,813
1886.....	4,062	1899.....	1,759
1887.....	3,545	1900.....	1,546
1888.....	4,753	1901.....	5,762
1889.....	5,465	1902.....	2,559
1890.....	2,506	1903.....	586
1891.....	2,089	1904.....	35
1892.....	1,464	1905.....	2,607
		1906*.....	2,661

* Burrstones in blocks, rough or unmanufactured, not bound up or prepared by binding into mill-stones. Duty free.

TABLE 6.
ABRASIVE MATERIALS.
IMPORTS OF EMERY.

Fiscal Year.	Emery. <i>a.</i>	Mfrs. of Emery. <i>b.</i>
1885.....	\$ 5,066	\$ 4,920
1886.....	11,877	5,832
1887.....	12,023	4,598
1888.....	15,674	4,001
1889.....	13,565	3,948
1890.....	16,922	5,313
1891.....	16,179	6,665
1892.....	17,782	6,492
1893.....	17,762	5,606
1894.....	14,433	2,223
1895.....	14,569	7,775
1896.....	16,287	11,913
1897.....	16,318	11,231
1898.....	17,661	15,478
1899.....	21,454	22,343
1900.....	19,312	25,615
1901.....	16,311	22,190
1902.....	14,476	23,892
1903.....	18,058	22,177
1904.....	21,626	29,273
1905.....	21,980	33,250
1906.....	21,781	42,080

a Emery in bulk, crushed or ground. Duty free.
b Emery wheels and manufactures of emery. Duty 25 p.c.

TABLE 7.
ABRASIVE MATERIAL.
IMPORTS OF PUMICE STONE.

Fiscal Year.	Value.
1885.....	\$ 9,384
1886.....	2,777
1887.....	3,594
1888.....	2,890
1889.....	3,232
1890.....	3,003
1891.....	3,696
1892.....	3,282
1893.....	3,798
1894.....	4,160
1895.....	3,609
1896.....	3,721
1897.....	2,903
1898.....	3,829
1899.....	5,973
1900.....	5,604
1901.....	5,516
1902.....	7,254
1903.....	6,152
1904.....	6,537
1905.....	8,447
*1906.....	9,053

* Pumice and pumice stone, ground or unground. Duty free.

TRIPOLITE.

There were practically no shipments of tripolite from Canadian deposits during 1906. Statistics of production of past years are shown in the following table.

TABLE 8.

ABRASIVE MATERIAL.

PRODUCTION OF TRIPOLITE.

Calendar Year..	Tons.	Value.
		\$
1896	644	9,960
1897	15	150
1898	1,017	16,660
1899	1,000	15,000
1900	336	1,950
1901	850	15,300
1902	1,052	16,470
1903	835	16,700
1904	320	6,400
1905	200	3,600
1906	nil	nil

ASBESTOS.

Returns from about twelve producing asbestos mines in 1906 showed a total production of asbestos and asbestic of 82,185 tons, valued at \$2,060, 143, made up as follows :—

—	Tons.	Value.	Average value per ton.
Crude Asbestos.....	3,841	\$ 635,345	\$16.54
Mill Stock.....	56,920	1,401,083	24.61
Total Asbestos.....	60,761	2,036,428	33.52
Asbestic, etc.	21,424	23,715	1.10
Total.....	82,185	2,060,143	25.06

Compared with 1905 an increase in total tonnage is shown of 13,922 or 20·3 per cent, while the increase in value was \$556,884 or 37 per cent. Statistics of production for several years past, as given in table 1, show the industry to be rapidly growing in volume.

Prices have been well maintained. In 1906 the range was about as follows :—

Crude No. 1.....	from \$175 to \$250 per ton.
Crude No. 2.	" 110 to 150 "
Mill Stock... ..	" 8 to 80 "
Asbestic.....	" 1 to 5 "
Asbestic Sand	50 cents per ton.

The crude stock and fibre are exported chiefly to the United States ; but also to Great Britain, Germany and other countries. The exports during the calendar year 1906 totaled 59,854 tons valued at \$1,689,257, as follows :—

	Tons.	Value.
To Great Britain	9,435	\$ 318,313
To United States.....	39,767	1,058,513
To Germany.....	3,654	82,117
To other countries.. ..	6,998	230,314
Total	59,854	\$1689,257

The imports of asbestos during the fiscal year were valued at \$137,974, as compared with \$116,836 in 1905.

During the year the Shawenegan Water Power Company built a power line to Thetford, and is now supplying electric power to the mines. Another important development during the year is the beginning of underground work by the Bell Asbestos Mines, and the American Asbestos Company. Hitherto all the working has been by open quarry.

Statistics of production, exports, and imports are given in the following tables :—

SESSIONAL PAPER No. 26b

TABLE 1.
ASBESTOS.
PRODUCTION.—1896 to 1906.

	Tons.	Value.	Average Value per ton.
1896—Asbestos	10,892	\$ 423,066	\$ 38.84
Asbestic	1,358	6,790	5.00
	12,250	\$ 429,856	\$ 35.09
1897—Asbestos	13,202	\$ 399,528	\$ 30.26
Asbestic	17,240	45,840	2.66
	30,442	\$ 445,368	\$ 14.63
1898—Asbestos	16,124	\$ 475,131	\$ 29.46
Asbestic	7,661	16,066	2.10
	23,785	\$ 491,197	\$ 20.65
1899—Asbestos	17,790	\$ 468,635	\$ 26.34
Asbestic	7,746	17,214	2.22
	25,536	\$ 485,849	\$ 19.03
1900—Asbestos	21,621	\$ 729,886	\$ 33.76
Asbestic	7,520	18,545	2.46
	29,141	\$ 748,431	\$ 25.68
1901—Asbestos	32,892	\$ 1,248,645	\$ 37.96
Asbestic	7,325	11,114	1.52
	40,217	\$ 1,259,759	\$ 31.32
1902—Asbestos	30,219	\$ 1,126,688	\$ 37.28
Asbestic	10,197	21,631	2.12
	40,416	\$ 1,148,319	\$ 28.41
1903—Asbestos	31,129	\$ 915,888	\$ 29.42
Asbestic	10,548	13,869	1.31
	41,677	929,757	\$ 22.31
1904—Asbestos	35,611	\$ 1,213,502	\$ 34.07
Asbestic	12,854	12,850	1.00
	48,465	\$ 1,226,352	\$ 25.30
1905—Asbestos	50,669	\$ 1,486,359	\$ 29.33
Asbestic	17,594	16,900	.96
	68,263	\$ 1,503,259	\$ 22.02
1906—Asbestos	60,761	\$ 2,036,428	33.52
Asbestic	21,424	23,715	1.11
	82,185	2,060,143	25.07

TABLE 2.

ASBESTOS.

PRODUCTION, ETC.—1880 TO 1895.

Calendar Year.	PRODUCTION.			Exports Average value per ton.
	Tons 2,000 Pounds.	Value.	Average Value per ton.	
		\$	\$ c.	\$ c.
1880.....	380	24,700	65.00	Exports taken as production.
1881.....	540	35,100	65.00	
1882.....	810	52,650	65.00	
1883.....	955	68,750	71.98	
1884.....	1,141	75,097	65 80	
1885.....	2,440	142,441	58.37	
1886.....	3,458	206,251	59.64	
1887.....	4,619	226,976	49.14	63.25
1888.....	4,404	255,007	57.90	70.56
1889.....	6,113	426,554	69.77	64.44
1890.....	9,860	1,260,240	127.81	75.52
1891.....	9,279	999,878	107.75	70.07
1892.....	6,082	390,462	64.19	69.35
1893.....	6,331	310,156	49.02	57.24
1894.....	7,630	420,825	55.15	59.82
1895.....	8,756	368,175	42.05	56.66

TABLE 3.

ASBESTOS.

EXPORTS.

Calendar Year.	Tons.	Value.	Average value per ton.
1892.....	5,380	\$373,103	\$69.35
1893.....	5,917	338,707	57.24
1894.....	7,987	477,837	59.82
1895.....	7,442	421,690	56.66
1896.....	11,842	567,967	47.96
1897.....	15,570	473,274	30.40
1898.....	15,346	494,012	32.19
1899.....	17,883	473,148	26.46
1900.....	16,993	693,105	39.61
1901.....	32,269	1,069,918	33.16
1902.....	31,074	995,071	32.02
1903.....	31,780	891,033	28.04
1904.....	37,272	1,160,887	31.14
1905.....	47,031	1,386,115	29.47
1906.....	59,854	1,689,257	28.22

TABLE 4.

ASBESTOS.

IMPORTS.

Fiscal Year.	Value.	Fiscal Year.	Value.
1885.....	\$ 674	1896.....	\$ 23,900
1886.....	6,831	1897.....	19,032
1887.....	7,836	1898.....	26,389
1888.....	8,793	1899.....	32,607
1889.....	9,943	1900.....	43,455
1890.....	13,250	1901.....	50,829
1891.....	13,298	1902.....	52,464
1892.....	14,090	1903.....	75,465
1893.....	19,181	1904.....	83,827
1894.....	20,021	1905.....	116,836
1895.....	26,094	*1906.....	137,974

*Asbestos in any form other than crude, and all manufactures of. Duty 25 p.c.

CHROMITE.

Within the past few years considerable improvements have been made in the methods of mining and treatment of the chromite ores of the Eastern townships, Province of Quebec. The total shipments in 1906 were 9,035 tons valued at \$91,859, as compared with 8,575 tons valued at \$93,301 in 1905; and shipments of 6,074 tons and 3,509 tons in 1904 and 1903 respectively.

The shipments in 1906 consisted of 4,060 tons of low grade product valued at \$34,375, or an average of \$8.46 per ton, and of 4,975 tons of high grade, chiefly concentrates, valued at \$57,484 or an average of \$11.55 per ton.

The prices realized were somewhat lower than those obtained in 1905.

The Canadian product is shipped to the United States and Europe, and is used in Canada in the manufacture of ferro-chrome at Buckingham, Que.

One of the largest producers reports that the unusual demand for iron and steel products has made a very satisfactory market for chrome ores of low grades suitable for furnace linings. The installation of modern mining and milling methods has enabled miners at Black Lake to meet the competition of New Caledonian and Turkish chrome ores in a fairly successful manner. A market in Canada is also opening up at Sydney, N.S., for the open-hearth furnaces there, and also at Buckingham where the Electric Reduction Company has again started the manufacture of ferro-chrome.

The methods of mining and concentrating the ore were described in the last report of this Section as follows :—

“The ore is sorted as it comes from the pit, and all running over 40 p.c. sesquioxide of chromium is graded crude No. 1 (over 47 p.c.) and No. 2 (between 40 p.c. and 47 p.c.). The waste or ore running less than 40 p.c. Cr_2O_3 is sent to the mills for concentration. Here it is crushed in jaw crushers and under stamps, and concentrated in Wilfley tables. Two grades of concentrates are produced and are finding a ready mar-

SESSIONAL PAPER No. 26b

ket chiefly in the United States. The high grade concentrates running 50 to 54 p.c. C_2O_3 are competing successfully with the high grade ores of New Caledonia."

The Black Lake Chrome and Asbestos Company operated throughout the year with a force of 85 men. This Company has a 30 stamp mill for concentrating its low grade ore, a tramway operated by cable connecting the shafts with the mill, and an air compressor at the pit, the whole plant being operated by electric power obtained from the St. Francis Hydraulic Company. This Company has also obtained control of the properties of the Montreal Chrome Iron Company.

The Canadian Chrome Co., Ltd., has completed the installations of concentrating works consisting of a 20 stamp mill and five Wilfley tables. Other companies owning properties in the district confined their attention to prospecting and development work.

The following list of companies comprises those chiefly interested in the Canadian chrome mining industry:—

The Black Lake Chrome and Asbestos Company, 86 Notre Dame St., Montreal, Que.

The Coleraine Chrome Co., W. H. Lambly, Inverness, Que.

The Canadian Chrome Co., Ltd., Thetford Mines, Que.

The American Chrome Co., Black Lake, Que.

The Star Chrome Co., 570 St. Denis St., Montreal, Que.

King Bros., Thetford Mines, Que.

Uses and Markets : The principal uses of chrome ore are for the manufacture of chromium salts and ferro-chrome alloys, and as a lining in open-hearth steel furnaces.

Prices in New York in 1906 ranged from \$17.25 to \$19.75 per long ton for 50 p.c. ore. The chief consumers in the United States are, as published in the Mineral Industry, New York—

The Kalion Chemical Company, Philadelphia, Pa.

The Baltimore Chrome Works, Baltimore, Md.

The Harbison-Walker Refractories Company, Pittsburg, Pa.

TABLE 1.
CHROMITE.
ANNUAL PRODUCTION.

Calendar Year.	Tons. 2,000 lbs.	Average price per ton.	Value.
		\$ cts	\$
1886.....	* 60	15 75	945
1887.....	38	15 00	570
1888 to 1893.....	Pas d. pro.		
1894.....	1,000	20 00	20,000
1895.....	3,177	13 00	41,300
1896.....	2,342	11 53	27,004
1897.....	2,637	12 31	32,474
1898.....	*2,021	12 00	24,252
1899.....	2,010	10 86	21,842
1900.....	2,335	11 56	27,000
1901.....	1,274	13 14	16,744
1902.....	900	14 44	13,000
1903.....	3,509	14 57	51,129
1904.....	6,074	11 05	67,143
1905.....	8,575	10 88	93,301
1906.....	9,035	10 17	91,859

* Railway shipments.

TABLE 2.
CHROMITE.
EXPORTS.

Calendar Year.	Tons.	Value.
1895.....	2,908	\$ 42,236
1896.....	2,466	31,411
1897.....	2,106	26,254
1898.....	1,683	20,783
1899.....	1,509	19,876
1900.....	368	8,259
1901.....	2,259	25,444
1902.....	740	7,535
1903.....	1,013	20,524
1904.....	3,338	60,336
1905.....	5,042	45,072
1906.....	891	10,188

COAL.

From the point of view of value, coal is the most important of Canada's mineral productions, constituting as it does over 24 p. c. of the total mineral output.

The total sales and shipments of coal in 1906 from mines throughout Canada were 9,762,601 short tons (8,716,608 long tons) valued at \$19,732,019, compared with 8,667,948 short tons (7,739,239 long tons), valued at \$17,520,263 in 1905. The increase of production was, therefore, 1,094,653 short tons or 12.6 p. c. and in value \$2,211,756 or 12.6 p. c., the average price per ton being practically the same in both years.

Only one anthracite mine is worked in Canada, the Bankhead Mines Ltd., at Banff, Alberta, and with this exception all of the coal mined is of the bituminous or lignite variety. Detailed statistics of production are given in tables 1, 2, and 3 following :—

TABLE 1.
COAL.

PRODUCTION BY PROVINCES, 1904, 1905 and 1906.

Province.	1904.		1905.		1906.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
		\$		\$		\$
Nova Scotia . . .	5,596,241	9,993,288	5,646,583	10,083,184	6,220,505	11,108,044
British Columbia	1,862,625	4,989,174	1,945,452	5,211,030	2,146,262	5,748,915
North West Territories including Yukon..	786,617	1,591,545	1,046,513	2,167,249	1,361,758	2,806,908
New Brunswick	9,112	18,224	29,400	58,800	34,076	68,152
Total	8,254,595	16,592,231	8,667,948	17,520,263	9,762,601	19,732,019

TABLE 2.
PRODUCTION.—COMPARISON OF 1905 AND 1906.

Province	INCREASE OR DECREASE.			
	Tons.	Per Cent.	Value.	Per Cent.
			\$	
Nova Scotia.....	<i>i</i> 573,922	10·16	<i>i</i> 1,024,860	10·16
British Columbia.....	<i>i</i> 200,810	10·32	<i>i</i> 537,885	10·32
North West Territories and Yukon.....	<i>i</i> 315,245	30·12	<i>i</i> 639,659	29·51
New Brunswick.....	<i>i</i> 4,676	15·90	<i>i</i> 9,352	15·90
Dominion.....	<i>i</i> 1,094,653	12·63	<i>i</i> 2,211,756	12·62

N.B. *i* Increase. *d* Decrease.

TABLE 3.
COAL.

ANNUAL PRODUCTION SHOWING THE INCREASE OR DECREASE EACH YEAR.

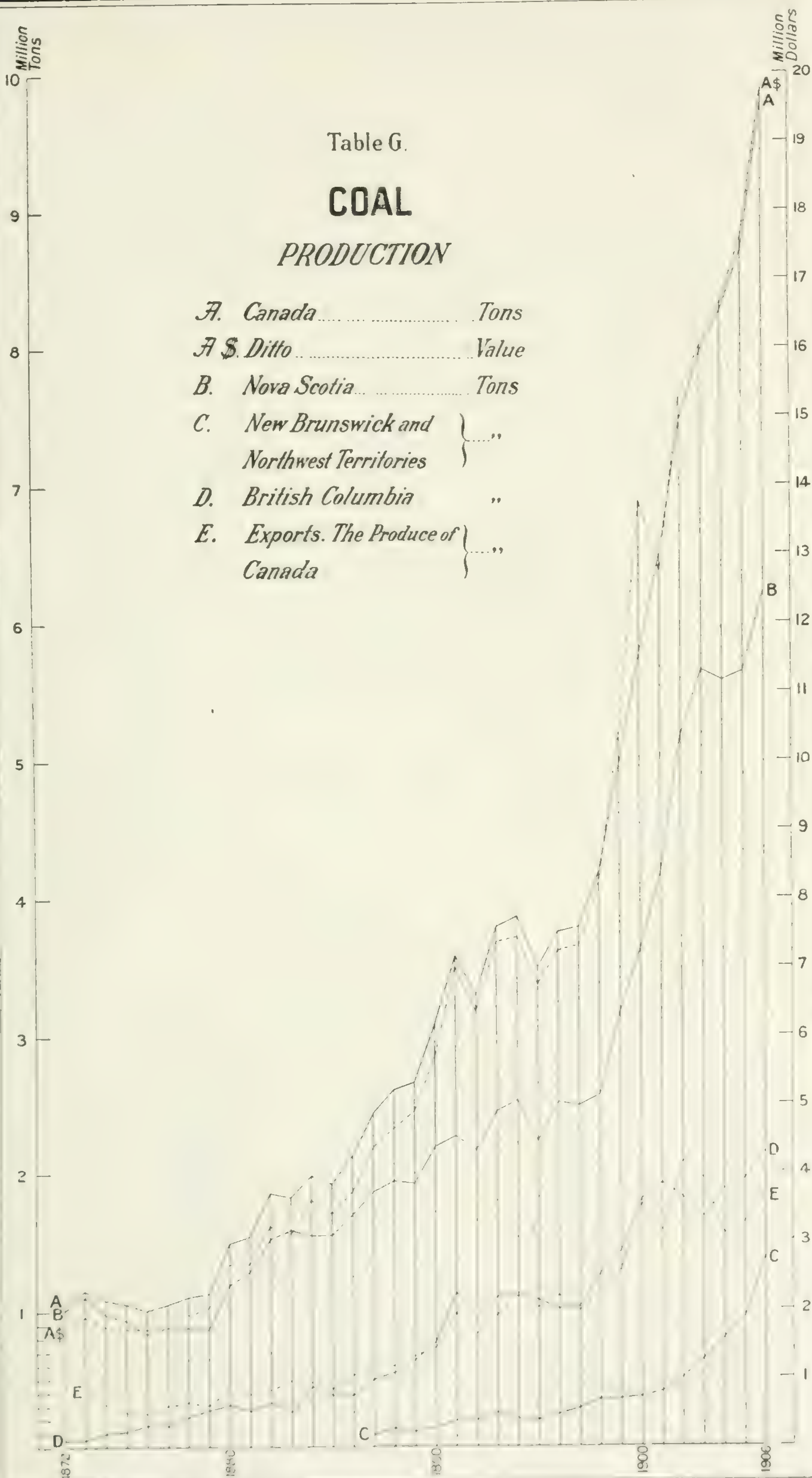
Calendar Year.	Tons.	Value.	Average Value per Ton.	Increase (<i>i</i>) or Decrease (<i>d</i>) in Tonnage.	Incr. (<i>i</i>) or Decr. (<i>d</i>) per cent.
1886.....	2,116,653	\$3,739,840	\$1 77		
1887.....	2,429,330	4,388,206	1 81	<i>i</i> 312,677	<i>i</i> 14·8
1888.....	2,602,552	4,674,140	1 80	<i>i</i> 173,222	<i>i</i> 7·1
1889.....	2,658,303	4,894,287	1 84	<i>i</i> 55,751	<i>i</i> 2·1
1890.....	3,084,682	5,676,247	1 84	<i>i</i> 426,379	<i>i</i> 16·0
1891.....	3,577,749	7,019,425	1 96	<i>i</i> 493,067	<i>i</i> 16·0
1892....	3,287,745	6,363,757	1 94	<i>d</i> 290,004	<i>d</i> 8·1
1893.....	3,783,499	7,359,080	1 95	<i>i</i> 495,754	<i>i</i> 15·1
1894. ...	3,847,070	7,429,468	1 93	<i>i</i> 63,571	<i>i</i> 1·7
1895.....	3,478,344	6,739,153	1 94	<i>d</i> 368,726	<i>d</i> 9·6
1896.....	3,745,716	7,226,462	1 93	<i>i</i> 267,372	<i>i</i> 7·7
1897.....	3,786,107	7,303,597	1 93	<i>i</i> 40,391	<i>i</i> 1·1
1898.....	4,173,108	8,224,288	1 97	<i>i</i> 387,001	<i>i</i> 10·2
1899.....	4,925,051	10,283,497	2 09	<i>i</i> 751,943	<i>i</i> 18·0
1900.....	5,777,319	13,742,178	2 38	<i>i</i> 852,268	<i>i</i> 17·3
1901.....	6,486,325	12,699,243	1 96	<i>i</i> 709,006	<i>i</i> 12·3
1902.....	7,466,681	15,210,877	2 04	<i>i</i> 780,356	<i>i</i> 15·1
1903. ...	7,960,364	15,942,833	2 00	<i>i</i> 493,683	<i>i</i> 6·6
1904.....	8,254,595	16,592,231	2 01	<i>i</i> 294,231	<i>i</i> 3·7
1905... ..	8,667,948	17,520,263	2 02	<i>i</i> 413,353	<i>i</i> 5·0
1906. ...	9,762,601	19,732,019	2 02	<i>i</i> 1,094,653	<i>i</i> 12·6

Of the total production in 1906 Nova Scotia and New Brunswick contributed about 64 p. c. ; Saskatchewan, Alberta and Yukon 13·9 p. c., and British Columbia 21·9 p. c. The following short table illustrates the relative importance of the various provinces as producers of coal at various periods since 1874 :—

Table G.

COAL PRODUCTION

<i>A.</i>	<i>Canada</i>	<i>Tons</i>
<i>A \$.</i>	<i>Ditto</i>	<i>Value</i>
<i>B.</i>	<i>Nova Scotia</i>	<i>Tons</i>
<i>C.</i>	<i>New Brunswick and Northwest Territories</i>	<i>„</i>
<i>D.</i>	<i>British Columbia</i>	<i>„</i>
<i>E.</i>	<i>Exports. The Produce of Canada</i>	<i>„</i>



Province.	1874	1880	1890	1898	1899	1900	1901	1902	1903	1904	1905	1906
	p. c.	p. c.	p. c.	. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.
Nova Scotia New Brunswick Saskatchewan, Alberta and Yukon... B. Columbia..	91	79	71	61·6	64·2	62·9	64·4	69·4	71·3	68·0	65·5	64·07
	8	20	4	8·3	6·8	6·1	6·0	6·4	7·7	9·5	12·1	13·95
	...	...	25	30·3	29 0	31·0	29·6	24·2	21·0	22·5	22·4	21·98

In each province or district, as shown in table 2, a larger production was obtained in 1906 than in 1905, the largest proportional increase being in Alberta and Saskatchewan, which had an increased output of over 30 p. c. In Nova Scotia the increase was a little over 10 p. c.; in New Brunswick, where the total production was only 34,076 tons, the increase was nearly 16 p. c.; while in British Columbia an increase of over 10 p. c. is shown.

The total quantity of Canadian coal exported in 1906 was 1,835,041 tons, nearly 200,000 tons more than was exported in 1905. This coal is exported from both the eastern and western provinces, and chiefly to the adjacent states of the United States.

The imports of coal into Canada during the fiscal year ending June 30, comprising bituminous, anthracite and coal dust, reached a total of 7,443,664 tons, which is imported chiefly from the states of Pennsylvania and Ohio to the Provinces of Ontario and Quebec.

Statistics of exports and imports since 1880, shown in tables 4 to 8, have been compiled from the Trade and Navigation Reports published by the Department of Customs.

TABLE 4.
COAL.
EXPORTS.

CALENDAR YEAR.	PRODUCE OF CANADA.	NOT THE PRODUCE OF CANADA.	CALENDAR YEAR.	PRODUCE OF CANADA.	NOT THE PRODUCE OF CANADA.
	Tons.	Tons.		Tons.	Tons.
1873.....	420,683	5,403	1890.....	724,486	82,534
1874....	310,988	12,859	1891.. . . .	971,259	77,827
1875.....	250,348	14,026	1892.....	823,733	93,988
1876.	248,638	4,995	1893.....	960,312	102,827
1877.....	301,317	4,829	1894.....	1,103,694	89,786
1878.. . . .	327,959	5,468	1895.....	1,011,235	96,836
1879.....	306,648	8,468	1896.....	1,106,661	116,774
1880.....	432,188	14,217	1897.....	986,130	101,848
1881.....	395,382	14,245	1898.....	1,150,029	99,189
1882.	412,682	37,576	1899.....	1,293,169	101,004
1883.....	486,811	44,388	1900.....	1,787,777	62,776
1884.....	474,405	62,665	1901.....	1,573,661	53,894
1885.....	427,937	71,003	1902.....	2,090,268	23,453
1886....	520,703	78,443	1903.....	1,954,629	27,138
1887.....	580,965	89,098	1904.....	1,557,412	27,308
1888.....	588,627	84,316	1905.....	1,635,287	86,792
1889.....	665,315	89,294	1906.....	1,835,041	44,758

TABLE 5.
COAL.
EXPORTS.—NOVA SCOTIA AND BRITISH COLUMBIA.

Calendar Year.	NOVA SCOTIA.		*BRITISH COLUMBIA.	
	Tons.	Value.	Tons.	Value.
1874.....	252,124	\$647,539	51,001	\$ 278,180
1875.....	179,626	404,351	65,842	356,018
1876.....	126,520	263,543	116,910	627,754
1877.....	173,389	352,453	118,252	590,263
1878.....	154,114	293,795	165,734	698,870
1879.....	113,742	203,407	186,094	608,845
1880.....	199,552	344,148	219,878	775,008
1881.....	193,081	311,721	187,791	622,965
1882.....	216,954	390,121	179,552	628,437
1883.....	192,795	336,088	271,214	946,271
1884.....	222,709	430,330	245,478	901,440
1885.....	176,287	349,650	250,191	1,000,764
1886.....	240,459	441,693	274,466	960,649
1887.....	207,941	390,738	356,657	1,262,552
1888.....	165,863	330,115	405,071	1,605,650
1889.....	186,608	396,830	470,683	1,918,263
1890.....	202,387	426,070	508,882	1,977,191
1891.....	194,867	417,816	767,734	2,958,695
1892.....	181,547	407,980	599,716	2,317,734
1893.....	203,198	470,695	708,228	2,693,747
1894.....	310,277	633,398	770,439	2,855,216
1895.....	241,091	534,479	728,283	2,692,562
1896.....	380,149	787,270	679,799	2,507,752
1897.....	307,128	642,754	630,341	2,221,737
1898.....	309,158	629,363	813,843	2,948,428
1899†.....	459,260	827,941	781,809	2,947,369

* See foot-note, table 16. † Since 1899, exports by provinces have not been published in Trade and Navigation Report.

TABLE 6.
COAL.
IMPORTS OF BITUMINOUS COAL.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
1880.....	457,049	\$1,220,761	1894.....	1,359,509	\$3,315,094
1881.....	587,024	1,741,568	1895.....	1,444,928	3,321,387
1882.....	636,374	1,992,081	1896.....	1,538,489	3,299,025
1883.....	911,629	2,996,198	1897.....	1,543,476	3,254,217
1884.....	1,118,615	3,613,470	1898.....	1,684,024	3,179,595
1885.....	1,011,875	3,197,539	1899.....	2,171,358	3,691,946
1886.....	930,949	2,591,554	1900.....	2,439,764	4,310,964
1887.....	1,149,792	3,126,225	1901.....	2,516,392	4,956,025
1888.....	1,231,234	3,451,661	1902.....	3,047,392	5,712,058
1889.....	1,248,540	3,255,171	1903.....	3,511,412	7,776,717
1890.....	1,409,282	3,528,959	1904.....	4,053,900	9,108,208
1891.....	1,598,855	4,060,896	1905.....	4,176,274	8,002,896
1892.....	1,615,226	4,099,221	1906*.....	4,495,550	8,360,348
1893.....	1,603,154	3,967,764			

Duty, 53 cts. per ton.

TABLE 7.

COAL.

IMPORTS OF ANTHRACITE COAL.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
1880.....	516,729	\$1,509,960	1894....	1,530,522	\$6,354,040
1881.....	572,092	2,325,937	1895....	1,404,342	5,350,627
1882.....	638,273	2,666,356	1896.....	1,574,355	5,667,096
1883.....	754,891	3,344,936	1897.....	1,457,295	5,695,168
1884.....	868,000	3,831,283	1898.....	1,460,701	5,874,685
1885.....	910,324	3,909,844	1899.....	1,745,460	6,490,509
1886.....	995,425	4,028,050	1900....	1,654,401	6,602,912
1887.....	1,100,165	4,423,062	1901.....	1,933,283	7,923,950
1888.....	+2,138,627	5,291,875	1902.....	1,652,451	7,021,939
1889.....	1,291,705	5,199,481	1903....	1,456,713	7,028,664
1890.....	1,201,335	4,595,727	1904.....	2,275,018	10,461,223
1891.....	1,399,067	5,224,452	1905*....	2,604,137	12,093,371
1892.....	1,479,106	5,640,346	1906.....	2,200,863	10,304,308
1893.....	1,500,550	6,355,285			

* Coal anthracite, and anthracite coal dust. Duty free.

† In Table 7, Imports of Anthracite Coal, a very considerable increase will be noticed in 1888 over 1887, an increase of over ninety-four per cent, the falling off again in 1889 being quite as remarkable. The average values per ton for the three years 1887, 1888 and 1889, were \$4.02, \$2.47 and \$4.03 respectively. Although a duty of fifty cents per ton on anthracite coal was removed May 13, 1887, it is hardly thought this would account for the changes indicated, and unless some error may possibly have crept into the Trade and Navigation Report, no explanation is available.

TABLE 8.

COAL.

IMPORTS OF COAL DUST.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
1880.....	3,565	\$ 8,877	1894.....	117,573	\$ 49,510
1881.....	337	666	1895....	181,318	52,221
1882.....	471	900	1896.....	210,386	53,742
1883.....	8,154	10,082	1897....	225,562	59,609
1884.....	12,782	14,600	1898....	229,445	45,556
1885.....	20,185	20,412	1899....	276,547	44,717
1886.....	36,230	36,996	1900.....	330,174	98,349
1887.....	31,401	33,178	1901.....	414,432	275,559
1888.....	28,808	34,730	1902.....	489,548	264,550
1889.....	39,980	47,139	1903.....	550,883	420,317
1890.....	53,104	29,818	1904.....	608,041	544,123
1891.....	60,127	36,130	1905.....	650,261	343,456
1892.....	82,091	39,840	1906*....	747,251	489,180
1893.....	109,585	44,474			

* Duty, 20 p. c., not over 13c. per ton.

With statistics of production, exports and imports of coal available, an estimate of the Canadian consumption can very readily be made, but as the statistics of imports do not cover the same period of 12 months as the other figures the results can only be taken as approximate.

Following is an estimate of the consumption of coal in 1906, while table 9 shows the statistics of consumption annually since 1886.

CONSUMPTION OF COAL IN CANADA, 1906.

	Tons.	Tons.
Production, Table 3.....	9,762,601	
Exports of Canada, Table 4	1,835,041	
Home Consumption of Canadian Coal.....		7,927,560
Imports, Tables 6, 7, 8.....	7,443,664	
Exports, not Produce.....	44,758	
Canadian Consumption of Imported Coal.....		7,398,906
Total Consumption of Coal in Canada, 1906.....		15,326,466

It will be observed that approximately one-half of the coal consumed is imported, and one-half from Canadian mines. Taking the exports of Canadian coal into consideration, however, it would appear that the total output would supply about 60 per cent of the Dominion's requirements.

TABLE 9.

COAL.

CONSUMPTION OF COAL IN CANADA.

Calendar Year.	Canadian.	Imported.	Total.	Percentage Canadian.	Percentage Imported.	Consumption per capita.
	Tons.	Tons.	Tons.			Tons.
1886.....	1,595,950	1,884,161	3,480,111	45·9	54·1	·758
1887... ..	1,848,365	2,192,260	4,040,625	45·7	54·3	·871
1888.....	2,013,925	3,314,353	5,328,278	37·8	62·2	1·137
1889... ..	1,992,988	2,490,931	4,483,919	44·4	55·6	·946
1890.....	2,360,196	2,581,187	4,941,383	47·8	52·2	1·031
1891... ..	2,606,490	2,980,222	5,586,712	46·7	53·3	1·153
1892.....	2,464,012	3,082,429	5,546,441	44·4	55·6	1·133
1893.....	2,823,187	3,110,462	5,933,649	47·6	52·4	1·198
1894.....	2,743,376	2,917,818	5,661,194	48·5	51·5	1·130
1895.....	2,467,109	2,933,752	5,400,861	45·7	54·3	1·066
1896.....	2,639,055	3,206,456	5,845,511	45·1	54·9	1·140
1897.....	2,799,977	3,124,485	5,924,462	47·3	52·7	1·143
1898.....	3,023,079	3,274,981	6,298,060	48·0	52·0	1·200
1899.....	3,631,882	4,092,361	7,724,243	47·0	53·0	1·454
1900.....	3,989,542	4,361,563	8,351,105	47·8	52·2	1·561
1901.....	4,912,664	4,810,213	9,722,877	50·5	49·5	1·810
1902.....	5,376,413	5,165,938	10,542,351	51·0	49·0	1·927
1903.....	6,005,735	5,491,870	11,507,605	52·2	47·8	2·055
1904.....	6,697,183	6,909,651	13,606,834	49·2	50·8	2·346
1905.....	7,032,661	7,343,880	14,376,541	48·9	51·1	2·396
1906.....	7,927,560	7,398,906	15,326,466	57·7	48·3	2·425

SESSIONAL PAPER No. 26b

Below are given some of the main features of the year's development of the coal mining industry by provinces :—

Nova Scotia :—Detailed statistics of coal production in Nova Scotia are shown in tables 10, 11, 12 and 13. Table 10 shows the annual production since 1872 in both long and short tons ; table 11 shows the quantities of coal raised and sold by counties during 1906 ; table 12 the output by collieries during the same year, and table 13 the distribution of coal sold.

The production in 1906 was greater than in 1905 by about 10 per cent, and over 36 per cent of the output was from the mines of the Dominion Coal Co. at Glace Bay. The coal finds a market in the adjoining provinces and in the United States, as well as locally. As shown in table 13, about 37 per cent is sold within the Province, over 34 per cent went to the Province of Quebec, while a little over 14 per cent was exported to the United States, chiefly to Everett, Mass., for use in the manufacture of gas and coke.

About 8 per cent was sold in New Brunswick, and nearly 3 per cent in Newfoundland.

TABLE 10.
COAL.
NOVA SCOTIA :—OUTPUT, SALES, COLLIERY CONSUMPTION, AND PRODUCTION.

Calendar Year.	Output, Tons, 2,240 lbs.	Sales, Tons, 2,240 lbs.	Colliery Consump- tion, Tons, 2,240 lbs.	Production* Tons 2,240 lbs.	Output, Tons, 2,000 lbs.	Sales, Tons, 2,000 lbs.	Colliery Consump- tion, Tons, 2,000 lbs.	Production* Tons, 2,000 lbs.	Price per ton. 2,240 lbs.	Value of production.
1872.....	880,950	785,914	110,341	896,255	986,664	880,224	123,582	1,003,806	\$1 75	\$1,568,446
1873.....	1,051,467	881,106	108,398	989,504	1,177,643	986,839	121,406	1,108,245	1 75	1,731,632
1874.....	872,720	749,127	119,582	868,709	977,446	839,022	133,932	972,954	1 75	1,520,240
1875.....	781,165	706,795	124,110	830,905	874,905	791,610	139,003	930,613	1 75	1,454,084
1876.....	709,646	634,207	113,788	747,995	794,804	710,312	127,443	837,755	1 75	1,308,991
1877.....	757,496	687,065	98,841	785,906	848,396	769,513	110,702	880,215	1 75	1,375,339
1878.....	770,603	693,511	88,627	782,138	863,075	776,732	99,262	875,994	1 75	1,368,741
1879.....	788,271	688,624	84,787	773,411	882,863	771,259	94,961	866,220	1 75	1,353,469
1880.....	1,032,710	954,659	96,831	1,051,490	1,156,635	1,069,218	108,451	1,177,669	1 75	1,840,108
1881.....	1,124,270	1,035,014	107,888	1,142,902	1,259,183	1,159,216	120,834	1,280,050	1 75	2,000,079
1882.....	1,365,811	1,250,179	111,381	1,361,560	1,529,708	1,400,200	124,747	1,524,947	1 75	2,382,730
1883.....	1,422,553	1,297,523	111,949	1,409,472	1,593,259	1,453,226	125,383	1,578,609	1 75	2,466,576
1884.....	1,389,295	1,261,650	116,769	1,378,419	1,556,011	1,413,048	130,781	1,543,829	1 75	2,412,233
1885.....	1,352,205	1,254,510	127,624	1,382,134	1,514,470	1,405,051	142,939	1,547,990	1 75	2,418,735
1886.....	1,502,611	1,373,666	142,421	1,516,087	1,682,924	1,538,506	159,512	1,698,018	1 75	2,653,152
1887.....	1,670,830	1,519,684	139,777	1,659,461	1,871,330	1,702,046	156,550	1,858,596	1 75	2,904,057
1888.....	1,776,128	1,576,692	157,443	1,734,135	1,989,263	1,765,895	176,336	1,942,231	1 75	3,034,735
1889.....	1,756,279	1,555,107	158,131	1,713,238	1,967,032	1,741,720	177,107	1,918,827	1 75	2,998,167
1890.....	1,984,001	1,786,111	161,240	1,947,351	2,222,081	2,000,444	180,589	2,181,033	1 75	3,407,864
1891.....	2,044,784	1,849,945	174,983	2,024,928	2,290,158	2,071,938	195,981	2,267,919	1 75	3,543,624
1892.....	1,942,780	1,752,934	175,092	1,928,026	2,175,913	1,963,286	196,103	2,159,389	1 75	3,374,046
1893.....	2,223,042	1,977,543	205,425	2,182,968	2,489,807	2,214,848	230,076	2,444,924	1 75	3,820,194
1894.....	2,250,631	2,060,920	196,206	2,257,126	2,520,707	2,308,231	219,751	2,527,982	1 75	3,949,970
1895.....	1,999,756	1,793,098	193,639	1,986,737	2,239,727	2,008,270	216,875	2,225,145	1 75	3,476,790
1896.....	2,292,675	2,046,828	192,975	2,239,803	2,567,796	2,292,447	216,132	2,508,579	1 75	3,919,655
1897.....	2,340,031	2,044,672	181,716	2,226,388	2,620,835	2,290,032	203,522	2,493,554	1 75	3,896,179
1898.....	2,262,656	2,121,126	167,428	2,288,554	2,534,175	2,375,661	187,519	2,563,180	1 75	4,004,970
1899.....	2,865,443	2,633,989	177,460	2,811,449	3,209,296	2,950,067	198,755	3,148,822	2 00	5,622,898
1900.....	3,298,791	2,998,737	236,563	3,235,300	3,694,646	3,358,585	264,951	3,623,536	2 50	8,088,250
1901.....	3,821,033	3,411,127	301,434	3,712,561	4,279,557	3,820,462	337,606	4,158,068	1 75	6,496,982
1902.....	4,725,480	4,229,120	379,198	4,608,318	5,292,538	4,736,614	424,702	5,161,316	2 00	9,216,636
1903.....	5,215,562	4,565,720	481,903	5,047,623	5,841,429	5,113,607	539,731	5,653,338	2 00	10,095,246
1904.....	5,131,985	4,551,740	444,904	4,996,644	5,747,823	5,097,949	498,292	5,596,241	2 00	9,993,288
1905.....	5,197,877	4,613,818	427,774	5,041,592	5,821,622	5,167,476	479,107	5,646,583	2 00	10,083,184
1906.....	5,844,813	5,093,131	460,891	5,554,022	6,546,191	5,704,307	516,198	6,220,505	2 00	11,108,044

* This production is obtained by adding sales and colliery consumption. For sales previous to 1872, see report of the Department of Mines, Nova Scotia, 1883, page 68.

TABLE 11.
COAL.
NOVA SCOTIA :—COAL TRADE BY COUNTIES, 1906.

CALENDAR YEAR.	CUMBERLAND.		PICTOR.		CAPE BRETON.		OTHER COUNTIES.	
	Raised.	Sold.	Raised.	Sold.	Raised.	Sold.	Raised.	Sold.
	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.	Tons, 2,000 lbs.
1st Quarter.....	203,286	179,387	184,172	147,067	1,028,587	697,588	32,769	22,179
2nd "	162,721	142,204	201,771	170,647	1,266,300	1,205,178	79,712	60,163
3rd "	151,534	128,862	179,665	159,535	1,311,040	1,366,344	95,006	93,493
4th "	142,193	115,855	203,888	180,061	1,198,480	952,233	105,067	83,561
Total, 1906.....	659,734	566,308	769,496	657,310	4,804,407	4,221,293	312,554	259,396
" 1905.....	693,500	595,064	668,454	560,937	4,248,970	3,858 641	210,698	152,834

TABLE 12.
COAL.

NOVA SCOTIA :—OUTPUT BY COLLIERIES DURING CALENDAR YEAR 1906.

Colliery.	Tons, 2,000 lbs.	Colliery.	Tons, 2,000 lbs.
<i>Cumberland County.</i>		<i>Inverness County.</i>	
Joggins	57,200	Mabou	24,725
Minudie	37,939	Port Hood	20,829
Scotia	2,128	Inverness Ry. & Coal Co. .	261,411
Springhill.. ..	480,569	<i>Cape Breton County.</i>	
Strathcona.....	26,499	Sydney Coal Co.....	3,775
Prospect	8,150	Dominion Coal Co.	3,979,075
Maritime.....	47,248	N. Scotia Steel & Coal Co	770,655
<i>Pictou County.</i>		Gowrie & Blockhouse Col- lieries	50,340
Acadia		McKay Mining Co.	562
Nova Scotia Steel and Coal Co	383,285 45,087	Cape Breton Coal Co.	5,590
Intercolonial.....	341,124		
			6,546,191

TABLE 13.
COAL.

NOVA SCOTIA :—DISTRIBUTION OF COAL SOLD.

Markets.	Calendar Year.					
	1904.		1905.		1906.	
	Tons, 2,000 lbs.	Per cent.	Tons, 2,000 lbs.	Per cent.	Tons, 2,000 lbs.	Per cent.
Nova Scotia, transported by land.....	918,822	18·0	1,145,255	27·4	1,542,301	27·04
Nova Scotia, transported by sea... ..	724,289	14·2	485,574	9·4	594,647	10·42
Total, Nova Scotia....	1,643,111	32·2	1,900,829	36·8	2,136,948	37·46
New Brunswick.....	474,053	9·3	477,360	9·2	468,273	8·21
Prince Edward Island.....	95,177	1·9	85,099	1·7	77,942	1·37
Quebec	1,916,384	37·6	1,721,751	33·3	1,971,860	34·57
Newfoundland... ..	155,794	3·1	165,117	3·2	166,564	2·92
United States	730,658	14·3	755,433	14·6	817,672	14·33
West Indies.....			2,827	·1		
Other countries	82,772	1·6	59,060	1·1	65,048	1·14
Total.....	5,097,949	100·0	5,167,476	100·0	5,704,307	100·00

New Brunswick :—The production of coal in this Province has never been large, but the industry has been showing an important development during the past two years. The production in 1906 is estimated at about 34,076 short tons.

TABLE 14.

COAL.

NEW BRUNSWICK :—PRODUCTION.

Calendar Year.	Tons.	Value.	Value per ton.
1887.....	10,040	\$ 23,607	\$2 35
1888.....	5,730	11,050	1 93
1889.....	5,673	11,733	2 07
1890.....	7,110	13,850	1 95
1891.....	5,422	11,030	2 03
1892.... .	6,768	9,375	1 39
1893.....	6,200	9,837	1 59
1894.....	6,469	10,264	1 59
1895.....	9,500	14,250	1 50
1896.	7,500	11,250	1 50
1897.....	6,000	9,000	1 50
1898.....	6,160	9,240	1 50
1899.	10,528	15,792	1 50
1900.....	10,000	15,000	1 50
1901.....	17,630	51,857	2 94
1902.....	18,795	39,680	2 11
1903.....	16,000	40,000	2 50
1904.....	9,112	18,224	2 00
1905.	29,400	58,800	2 00
1906.....	34,076	68,152	2 00

*North West Territories :—*The development of the western prairies, the rapid growth of population with the accompanying demand for fuel both for domestic use and for transportation, as well as the demand for fuel by the mining and metallurgical industry of British Columbia, have been responsible for a large increase in the production of coal from what are now the new Provinces of Alberta and Saskatchewan. A small quantity is also mined for local use in the Yukon Territory.

Statistics of production show a total output in 1906 of 1,361,758 tons, as compared with 1,046,513 tons in 1905, and over twice the production in 1903.

This output includes bituminous and lignite coal, as well as a growing production of semi-anthracite from Banff.

TABLE 15.
COAL.
NORTH WEST TERRITORIES :—PRODUCTION.

Calendar Year.	Tons.	Value.	Value per ton.
1887.....	74,152	\$ 157,577	\$ 2 13
1888.....	115,124	183,354	1 59
1889.....	97,364	179,640	1 85
1890.....	128,953	198,498	1 54
1891.....	174,131	437,243	2 51
1892.....	184,370	469,930	2 55
1893.....	238,395	598,745	2 51
1894.....	199,991	488,980	2 45
1895.....	185,654	414,064	2 23
1896.....	225,868	606,891	2 69
1897.....	267,163	667,908	2 50
1898.....	340,088	825,220	2 43
1899.....	334,600	811,500	2 43
1900.....	351,950	839,375	2 38
1901.....	391,139	1,008,917	2 58
1902.....	478,129	1,110,521	2 32
1903.....	614,445	1,316,743	2 14
1904.....	786,617	1,591,545	2 02
1905.....	1,046,513	2,167,249	2 07
1906.....	1,361,758	2,806,908	2 06

The special features of this industry have been described by Mr. Denis of this Department as follows :—

“The following short account of the development of the western coal industry during the past year is given as the result of a visit to the various fields :—

The coal industry along the Crowsnest branch of the Canadian Pacific railway is developing very quickly. At Taber, some thirty miles east of Lethbridge, the Reliance Coal Company, which started work about a year ago, has now a very complete surface plant, and is in a position to produce 300 tons a day.

At Lethbridge, the Alberta Railway and Irrigation Company (late Alberta Railway and Coal Company), have extended their workings under the valley of the river. They are continually introducing improvements and additions at their colliery, the latest being a new Rand compressor with a free air capacity of 3,300 cubic feet a minute.

The Diamond Coal Company is at present starting to develop a colliery six miles north of Lethbridge on the opposite bank of the

SESSIONAL PAPER No. 26b

river. The intention of the Company is to develop the property for the next eighteen months, at which time the new Canadian Pacific Railway bridge spanning the valley is expected to be completed, and will bring the line of railway within a short distance of the mine.

At Lundbreck the Lund-Breckenridge Coal Company's mine, which was only in the development stage last year, is now the centre of quite a large settlement. It has a very complete and up-to-date surface plant, with a steel head frame sixty-five feet high. The mine only began shipping in April and has now an output of 150 to 200 tons a day. The capacity of the screens is at present 500 tons, but it is capable of large extensions.

At Frank, the Canadian-American Coal Company's principal addition to their surface works is a tipple which is now in course of construction and is designed to handle 2,000 tons a day. The main entry is now in 8,600 feet.

The Hillcrest Coal and Coke Company, whose mine is situated south-east of Frank, Alberta, on section 18, range III, township 7, west of the fifth meridian, started development in September, 1905, and the first shipment of coal was made in March, 1906. They own a spur of standard gauge railway two miles long, connecting the tipple with the Canadian Pacific railway, and have now a production capacity of 200 tons a day.

The West Canadian Collieries Company, offices at Blairmore, which has the only installation in the west of mechanical coke ovens (a set of Belgian ovens of the Bernard type), had been rather troubled by the high contents in ash of their coke. They have installed at Lille a splendidly equipped washer, designed to wash all coal sent to the coke ovens under three-quarters of an inch in size, with the result that the ash in the coke has been reduced by one-half. The washer comprises Luhrig jigs and Spitzkatsen, and can treat 300 tons in a day of ten hours; all the labour in connexion with it is performed by one man at the engine and one labourer. Both collieries, Lille and Bellevue, were working steadily all the year.

At Coleman, the International Coal and Coke Company are building ninety additional coke ovens of beehive pattern. This will double their capacity. The colliery has a very up-to-date plant and a steady output.

The Pacific Coal Company, with mine at Bankhead, near Banff, Alberta, have completed and put in operation their large breaker, to prepare the anthracite coal for the market. It is of the best modern type and probably the most complete in North America. This coal is thoroughly divested of all friable parts so that it can stand long tran-

sportation without breaking up. The result of this preparation, however, is the production of a rather large proportion of anthracite dust. After a long series of careful experiments, the Company is erecting a briquetting plant to use this dust. The plant, which may be in operation at the close of the year, will produce 200 tons of briquets per day. The presses adopted are of the Zwoier pattern.

In the Edmonton district, all the coal mines have been very active, and everywhere provision was being made for a greatly increased output. The city of Edmonton has been growing very rapidly, and the market for coal has naturally grown in proportion.

The feature of the year in the district has been the inauguration of mining by shafts. Previously, all the mines were worked by tunnels driven into the banks of the Saskatchewan river, but there are now three mines that have sunk shafts from 60 to 195 feet. The individual production of the mines is so far small, the largest not exceeding 200 tons in two shifts."

British Columbia :—Statistics of coal production in British Columbia since 1836 are shown in table 16 following. The output in 1906 was the largest yet recorded and showed an increase of more than 10 p. c. over the output in 1905.

The production during 1906 has been well described by the Provincial Mineralogist in the annual report of the Minister of Mines for British Columbia as follows :—

"During the year 1906 the actual production of coal in British Columbia has as yet been confined to the two well known districts, the collieries in the vicinity of the Crowsnest pass, and the collieries on Vancouver island.

In the former of these districts the Crow's Nest Pass Coal Co. has been operating collieries at Michel, Coal Creek, and, for the first portion of the year, at Carbonado ; but latterly this last colliery has been closed down.

The collieries on Vancouver island have been operated by two companies, the Western Fuel Co. at Nanaimo, and the Wellington Colliery Co. at Ladysmith and Comox.

The gross output of the coal mines of the Province for the year was 1,899,076 tons (2,240 lbs.), which, with 17,230 tons taken from stock, makes a total consumption of 1,916,306 tons. Of this total amount, 1,361,728 tons were sold as coal, of which 681,899 tons were for consumption in Canada and 679,829 tons were exported ; while 381,773 tons were used in making coke, and 172,805 tons were used under the Company's boilers, etc., or sold locally.

SESSIONAL PAPER No. 26b

The amount of coke made was 199,227 tons (2,240 lbs.), which, together with 11,670 tons taken from stock, made the sales for the year 210,897 tons.

The following table indicates the markets in which the coal and coke output of the Province was sold :—

Coal.	Coast.	Crowsnest pass.	Total.
Sold for consumption in Canada, tons, 2,240 lbs.	531,106	150,793	681,899
Sold for export to United States, lbs.	433,183	230,863	664,046
Sold for exports to other countries, lbs.	15,783	.....	15,783
	980,072	381,656	1,361,728
Coke.			
Sold for consumption in Canada.	14,547	134,646	149,193
Sold for export to United States.	8,304	53,400	61,704
Sold for export to other countries. ....	.....	.....	.....
	22,851	188,046	210,897

VANCOUVER ISLAND COLLIERIES.

The Vancouver Island collieries mined in 1906 some 1,178,627 tons (2,240 lbs.) of coal, which, with 17,230 tons taken from stock, makes the total amount of coal disposed of 1,195,857 tons, distributed as follows :—

	Long tons.
Sold as coal in Canada.	531,106
" United States.	433,183
" other countries.	15,783
Total sold as coal.	980,072
Used under companies' boilers, etc.	138,057
Used in making coke.	77,728
	1,195,857

The total coal sales of the coast collieries show an increase of 172,042 long tons, or about 21·3 p.c. over the preceding year. The amount of coal exported to the United States is very little greater than it was last year, but amounts to about 45·8 p.c. of the total sales. The chief market for this coal is still San Francisco, although Alaska, with its increasing requirements for mining and smelting, has become an important factor in the export trade, and promises to become greater. The consumption of coal in that portion of British Columbia served by the Coast collieries shows a marked increase, being 150,774 long tons, or 39·6 p.c. greater than during the preceding year.

The production of coke on the Coast is confined to one company, the Wellington Colliery Co., which made in 1906 only 9,842 long tons ; but took from its stock piles some 13,009 tons, making the coke sales 22,851 tons, of which amount 14,547 tons were sold locally, and 8,304

tons were exported, chiefly to Alaska points. The local consumption of coke shows an increase of 9,137 tons, or 169 p.c., due to the active operations of the Vancouver Island copper smelters. The increase in the amount of coke exported is equally marked, being 4,004 tons, or 93 p.c., and is due to the constantly increasing copper smelting operations carried on in Alaska.

While these increases are very considerable, they are not nearly as great as they would have been but for the shortage of labour at the various collieries, which were, therefore, quite unable to satisfy the demand for fuel. A fuel famine seemed to be imminent, and, as a matter of fact, in the spring of 1907 coke had to be and was imported, a cargo of some 3,000 tons having been received by the Crofton smelter from Australia.

The selling price of coal has also advanced very much, so much so that local coal dealers are charging \$7.75 for 2,000 lbs. of coal delivered for domestic use.

CROWSNEST PASS COLLIERIES.

In the Rocky Mountain coal field, the collieries in British Columbia are all operated by the Crow's Nest Pass Coal Company, although over the boundary in the Province of Alberta there are three or four other companies operating. The Crow's Nest Pass Coal Company operated collieries at Michel, Coal Creek, and at Carbonado (Morrissey); the latter, however, was shut down on April 1 and has not since resumed operations. This Company mined during the year 720,449 tons (2,240) of coal, the disposition of which is shown in the following table:—

	Long tons.	
Sold as coal in Canada.....	150,793	
" United States.....	230,863	
	<hr/>	381,656
Used by Company in making coke..		304,045
" under Companies' boilers, etc.....		34,748
		<hr/>
		720,449

The amount of coke produced from the coal noted above was 189,385 long tons, of which 1,339 tons were carried over the year as stock, and 188,046 tons sold; some 134,646 tons for consumption in Canada, all in British Columbia, while 53,400 tons were exported to the United States. The coal sales of the Crow's Nest Company this year are less than during the preceding year by 13,285 tons, or 3.3%. The coke sales also show a decrease of 70,335 tons, or 27.2%. These decreases are accounted for by the fact that in the fall a labour strike closed the mines for six weeks or two months, and later the unusually heavy snow fall blocked the railways to such an extent that they were unable to move the coal."

TABLE 16.
COAL.
BRITISH COLUMBIA :—PRODUCTION.

Calendar Year.	Output Tons, 2,240 lbs.	Home Con- sumption, Tons, 2,240 lbs.	Sold for Export, Tons, 2,240 lbs. †	PRODUCTION.*		Price per ton, 2,240 lbs	Value.
				Tons, 2,240 lbs.	Tons, 2,000 lbs.		
						\$	\$
1836-52..	10,000	From 1836 to 1873 inclu- sive, the output is taken as production.			11,200	4 00	40,000
1852-59..	25,398				28,446	4 00	101,592
1859¶...	1,989				2,228	4 00	7,956
1860.....	14,247				15,957	4 00	56,988
1861.....	13,774				15,427	4 00	55,096
1862.....	18,118				20,292	4 00	72,472
1863.....	21,345				23,906	4 00	85,380
1864.....	28,632				32,068	4 00	114,528
1865.....	32,819				36,757	4 00	131,276
1866.....	25,115				28,129	4 00	100,460
1867. ...	31,239				34,988	4 00	124,956
1868.....	44,005				49,286	4 00	176,020
1869.....	35,802				40,098	4 00	143,208
1870.....	29,843				33,424	4 00	119,372
1871-2-3.	148,459				166,274	4 00	593,836
1874.....	81,547	25,023	56,038	81,061	90,788	3 00	243,183
1875.....	110,145	31,252	66,392	97,644	109,361	3 00	292,932
1876.....	139,192	17,856	†122,329	140,185	157,007	3 00	420,555
1877.....	154,052	24,311	115,381	139,692	156,455	3 00	419,076
1878.....	170,846	26,166	164,682	190,848	213,750	3 00	572,544
1879.....	241,301	40,294	192,096	232,390	260,277	3 00	697,170
1880. ...	267,595	46,513	225,849	272,362	305,045	3 00	817 086
1881.....	228,357	40,191	189,323	229,514	257,056	3 00	688,542
1882.....	282,139	56,161	232,411	288,572	323,201	3 00	865,716
1883.....	213,299	64,786	149,567	214,353	240,075	3 00	643,059
1884. ...	394,070	87,388	306,478	393,866	441,130	3 00	1,181,598
1885.....	365,596	95,227	237,797	333,024	372,987	3 00	999,072
1886.....	326,636	85,987	249,205	335,192	375,415	3 00	1,005,576
1887....	413,360	99,216	334,839	434,055	486,142	3 00	1,302,165
1888.....	489,301	115,953	365,714	481,667	539,467	3 00	1,445,001
1889.....	579,830	124,574	443,675	568,249	636,439	3 00	1,704,747
1890.....	678,140	177,075	508,270	685,345	767,586	3 00	2,056,035
1891.....	1,029,097	202,697	806,479	1,009,176	1,130,277	3 00	3,027,528
1892	826,335	196,223	640,579	836,802	937,218	3 00	2,510,406
1893.....	978,294	207,851	768,917	976,768	1,093,980	3 00	2,930,304
1894.....	1,012,953	165,776	827,642	993,418	1,112,628	3 00	2,980,254
1895.....	939,654	188,349	756,334	944,683	1,058,045	3 00	2,834,049
1896.....	894,882	261,984	634,238	896,222	1,003,769	3 00	2,688,666
1897.....	892,296	290,310	619,860	910,170	1,019,390	3 00	2,730,510
1898....	1,136,485	375,423	752,863	1,128,286	1,263,680	3 00	3,384,858
1899.....	1,306,324	526,058	751,711	1,277,769	1,431,101	3 00	3,833,307
1900.	1,590,178	685,667	914,184	1,599,851	1,791,833	3 00	4,799,553
1901.....	1,691,557	799,666	914,163	1,713,829	1,919,488	3 00	5,141,487
1902.....	1,641,626	837,871	776,809	1,614,680	1,808,441	3 00	4,844,040
1903.....	1,450,663	947,499	549,449	1,496,948	1,676,581	3 00	4,490,844
1904.....	1,685,698	1,129,465	533,593	1,663,058	1,862,625	3 00	4,989,174
1905.....	1,736,696	1,089,667	647,343	1,737,010	1,945,452	3 00	5,211,030
1906.....	1,899,076	1,236,176	679,829	1,916,305	2,146,262	3 00	5,748,915

* This production is obtained by adding 'Home Consumption' and 'Sold for Ex-
port.'

† 52,935 tons of this amount were exported as sales without the division into the
'Home Consumption' and 'Sold for Export.'

‡ The figures in the 'Sold for Export' column do not agree as they should with those
given in table 5, the only explanation being that the data in the two cases are from
different sources, and it has not been possible to find out the cause of the difference.

¶ Two months only.

7-8 EDWARD VII., A. 1908

Mr. Denis, who visited some of the coal fields in this district also, refers to some of the coal properties being developed as follows :—

“ On the British Columbia side of the Crowsnest pass the coal industry has been very active. One of the noteworthy features is the start which the Canadian Pacific railway is making to mine coal at Hosmer, a station on the railway about eight miles north of Fernie. The work, up to July, had mainly been of a prospecting nature, but there seems to be little doubt that an important colliery will soon be added to those of the Crowsnest pass.

“ The Imperial Coal Company own some coal lands on Fording river, a tributary of the Elk river, above Michel creek, and have begun surveys for a line of railway to tap their areas.

“ So far, the only producing coal company of the Crowsnest Pass field, is the Crow's Nest Pass Coal Company. This Company has two collieries working actively, at Coal creek and at Michel, and a third one at Carbonado, on which a great deal of work has been done, but which is not producing at present. The year's main improvements at these two collieries have been the completion of a steel tippie at Coal creek, designed to handle an output of 4,000 tons in 10 hours, and the installation of compressed air haulage at the Michel colliery to replace horse haulage. Practically one-half of the coal output is used in the manufacture of coke, which is shipped to the West Kootenay smelters, or exported.

“ The Nicola valley is now entered by a branch line of the Canadian Pacific railway from Spences Bridge. It is expected that this will be open for traffic during the autumn. The transport facilities thus afforded should be an incentive to prospecting for coal in this region. Coal certainly occurs there, but nothing very definite is yet known as to the extent of the fields. The Diamond Vale Company have been the most active in the work of prospecting. They have a diamond drill at work continuously on their Quilchena area.

“ A couple of diamond drill holes were also bored during the year in the valley between the Coldwater and the Nicola rivers.”

COKE.

Oven coke is made in Nova Scotia, Alberta, and British Columbia. The total quantity of coal charged to ovens during 1906 was 1,297,340 short tons, from which there was produced 768,280 tons of coke, as well as certain by-products from the ovens of the Dominion Iron and Steel Co. at Sydney.

The production by provinces was as follows in tons of 2,000 lbs.:—

Province.	Coal charged to ovens.	Output of coke.	STOCK ON HAND.		Coke sold or used.	Value of sales, etc.
			Jan. 1.	Dec. 31.		
	Tons.	Tons.	Tons.	Tons.	Tons.	\$
Nova Scotia.	765,819	475,773	1,436	845	476,364	1,540,976
Alberta . . .	103,936	69,372	3,800	3,686	69,486	268,042
Br. Columbia.	427,585	223,135	14,815	1,745	236,205	1,054,485
	1,297,340	768,280	20,051	6,276	782,055	2,863,503

In 1905 the amount of coke sold or used was 700,488 tons, the increase in 1906 being, therefore, 81,567 tons or 11.64 p. c. This increase is mainly due to the growth of the iron and steel metallurgical industries of Nova Scotia, and to the demand for coke for use in the smelting furnaces of British Columbia. Statistics of production since 1886 are shown in tables 1 and 2 following :—

TABLE 1.
COKE.
ANNUAL PRODUCTION.

Calendar Year.	Tons.	Value.	Value per ton.
1886.....	35,396	\$101,940	\$2.88
1887.....	40,428	135,951	3.36
1888.....	45,373	134,181	2.96
1889.....	54,539	155,043	2.84
1890.....	56,450	166,298	2.95
1891.....	57,084	175,592	3.08
1892.....	56,135	160,249	2.85
1893.....	61,078	161,790	2.65
1894.....	58,044	148,551	2.56
1895.....	53,356	143,047	2.68
1896.....	49,619	110,257	2.22
1897.....	60,686	176,457	2.91
1898.....	87,600	286,000	3.26
1899.....	100,820	350,022	3.47
1900.....	157,134	649,140	4.13
1901.....	365,531	1,228,225	3.36
1902.....	502,043	1,519,185	3.03
1903.....	561,318	1,734,404	3.09
1904.....	554,083	2,032,048	3.66
1905.....	700,488	2,436,211	3.48
1906.....	782,055	2,863,503	3.66

TABLE 2.

COKE.

PRODUCTION OF COKE BY PROVINCES.

Calendar Year.	Nova Scotia.		British Columbia.		N. W. Territories.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
		\$		\$		\$
1897.....	41,532	90,950	19,154	85,507	.....	.....
1898.....	48,400	111,000	39,200	175,000	.....	.....
1899.. . . .	62,459	178,767	38,361	171,255	.....	.....
1900.....	61,767	223,395	95,367	425,745	.....	.....
1901.....	222,694	590,560	142,837	637,665	.....	.....
1902.....	363,330	899,930	138,713	619,255	.... .	.....
1903... . . .	371,745	888,094	189,573	846,310	.....	.....
1904.....	275,927	805,022	257,172	1,148,090	20,984	78,936
1905.....	386,366	1,054,712	269,256	1,202,035	44,866	179,464
1906.....	476,364	1,540,976	236,205	1,054,485	69,486	268,042

The production in the Province of Nova Scotia is all consumed within that Province. In British Columbia, however, a large portion of the output is exported to the United States. According to direct returns from the companies the quantity of coke sold for export was 69,109 short tons.

This statement of export differs considerably from the figures of export published by the Department of Customs, according to which authority the actual exports were only 37,003 tons (see table 3).

The imports of coke in 1906 were 480,222 tons, chiefly for use in the iron blast furnaces in Ontario.

Statistics of exports and imports of coke, as compiled from the Trade and Navigation reports, are shown in tables 3 and 4.

TABLE 3.
COKE.
EXPORTS OF COKE.

Calendar Year.	Tons.	Value.
		\$
1897	2,987	6,078
1898	3,774	8,394
1899	5,557	18,726
1900	41,529	131,278
1901	57,505	176,990
1902	62,568	180,920
1903	32,608	135,957
1904	102,463	345,031
1905	116,071	509,908
1906	37,003	168,571

TABLE 4.
COKE.
IMPORTS OF OVEN COKE.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
		\$			\$
1880	3,837	19,353	1894	42,864	176,996
1881	5,492	26,123	1895	43,235	149,434
1882	8,157	36,670	1896	61,612	203,826
1883	8,943	38,588	1897	83,330	267,540
1884	11,207	44,518	1898	135,060	347,040
1885	11,564	41,391	1899	141,284	362,826
1886	11,858	39,756	1900	187,878	506,839
1887	15,110	56,222	1901	308,786	680,138
1888	25,487	102,334	1902	267,142	842,815
1889	29,557	91,902	1903	256,723	1,222,756
1890	36,564	133,344	1904	221,050	765,123
1891	38,533	177,605	1905	371,593	807,842
1892	43,499	194,429	1906 ....Duty free	480,222	1,311,375
1893	41,821	156,277			

PEAT.

Although the production of peat fuel cannot yet be said to have become a well established industry in Canada, there has been a good deal of experimental work in progress at different times and in different localities, which has resulted during the past six years in a small annual production of peat. During 1906 the Condensed Peat Fuel Company, Ltd., of Peterboro, for five months operated their plant $\frac{3}{4}$ of a mile north of Victoria Road, Ontario, and the Montreal and Ottawa Peat Company, Limited, worked for four months on the bog in the township of Alfred, Prescott county. A total of 474 tons of peat was sold, valued at \$1,422.

The Interwest Peat Fuel Co., of Winnipeg, were installing machinery and preparing to operate their bog at Lac du Bonnet, Man. Sales of peat during the past seven years have been reported as follows :—

Year.	Tons.	Value.
1900.....	400	\$ 1,200
1901.....	220	600
1902.....	475	1,663
1903.....	1,100	3,300
1904.....	800	2,400
1905.....	80	260
1906.....	474	1,422

GRAPHITE.

Graphite was mined in Quebec Province during 1906 by the Calumet Mining and Milling Graphite Co., at Calumet, Que., the Diamond Graphite Co., Buckingham, Que., and the Bell Mines, Buckingham, Que., none of which, however, made any shipments. The Buckingham Graphite Co., of Buckingham, shipped a quantity of milled product held over from previous years. In Ontario the Black Donald mine in Brougham tp., was operated by the Ontario Graphite Co., Ltd., and the Elmsley mines, North Elmsley, Lanark Co., by the Globe Refining Co., Ltd., both of Ottawa.

The total quantity of graphite mined was 3,922 tons, of which 1,500 tons were milled. The sales and shipments were 222 tons of crude ore valued at \$5,000, and 165 tons of milled graphite valued at \$13,300, or a total of 387 tons valued at \$18,300.

The value of the imports of plumbago, black-lead and other manufactures of plumbago during 1906 reached a total of \$88,106.

Annual statistics of the production, exports and imports of graphite are shown in the following tables :—

TABLE 1.
GRAPHITE.
ANNUAL PRODUCTION.

Calendar Year.	Tons.	Value.	Calendar Year.	Tons.	Value.
1886.....	500	\$4,000	1896.....	139	\$ 9,455
1887.....	300	2,400	1897.....	436	16,240
1888.....	150	1,200	1898.....		13,698
1889.....	242	3,160	1899.....	1,130	24,179
1890.....	175	5,200	1900.....	1,922	31,040
1891.....	260	1,560	1901.....	2,210	38,780
1892.....	167	3,763	1902.....	1,095	28,300
1893.....	Nil.	Nil.*	1903.....	728	23,745
1894*.....	3	223	1904.....	452	11,760
1895.....	220	6,150	1905.....	541	16,735
			1906.....	387	18,300

* Exports.

TABLE 2.

GRAPHITE.

EXPORTS.

Calendar Year.	Value.	Calendar Year.	Value.
1886.....	\$ 3,586	1896	\$ 9,480
1887.....	3,017	1897.....	4,325
1888....	1,080	1898.....	13,098
1889.....	538	1899.....	22,490
1890	1,529	1900.....	46,197
1891.....	72	1901.....	35,102
1892.....	3,952	1902.....	24,839
1893.....	38	1903.....	43,642
1894.....	223	1904.....	16,567
1895	4,833	1905....	8,114
		Cwt.	\$
1906 {	Crude	2,121	2,468
	Manufactures of.....		5,274
			\$ 7,742

SESSIONAL PAPER No. 26b

TABLE 3.

GRAPHITE.

IMPORTS OF RAW AND MANUFACTURED GRAPHITE.

Fiscal Year.	Plumbago.	Manufactures of plumbago.	
		Black-lead.	Other Manufactures.
1880.....	\$1,677	\$18,055	\$2,738
1881.....	2,479	26,544	1,202
1882.....	1,028	25,132	2,181
1883.....	3,147	21,151	2,141
1884.....	2,891	24,002	2,152
1885.....	3,729	24,487	2,805
1886.....	5,522	23,211	1,408
1887.....	4,020	25,766	2,830
1888.....	3,802	7,824	22,604
1889.....	3,546	11,852	21,789
1890.....	3,441	10,276	26,605
1891.....	7,217	8,292	26,201
1892.....	2,988	13,560	23,085
1893.....	3,293	16,595	23,051
1894.....	2,177	17,614	16,686
1895.....	2,586	13,922	21,988
1896.....	2,865	18,434	19,497
1897.....	1,406	17,863	20,674
1898.....	1,862	19,638	32,653
1899.....	4,979	21,334	36,490
1900.....	4,437	22,078	38,440
1901.....	2,357	25,646	49,890
1902.....	3,649	20,467	43,656
1903.....	2,870	22,559	47,117
1904.....	1,802	26,053	41,510
1905.....	2,499	30,743	44,545
1906	Duty.		
	{ Plumbago, not ground, etc.....	10 p.c.	.....
	{ Black-lead.....	25 "	\$2,791 \$33,907
	{ Plumbago ground, and manufactures of N.E.S.	25 "	\$19,058
	{ Crucibles, clay or plumbago.....	Free..	32,350
Total, 1906.....		\$2,791	\$33,907 \$51,408

Artificial graphite :—The manufacture of artificial graphite in electric furnaces has been carried on for some years at Niagara Falls, New York, by the International Atcheson Graphite Company. A small plant has now been established on the Canadian side of the river at Niagara Falls, Ont., and the quantity of artificial graphite made during 1906 is reported by the manufacturers as 445,047 pounds.

GYPSUM.

Gypsum is mined in Canada chiefly in the Provinces of Nova Scotia and New Brunswick, also in small quantities in the Province of Ontario and in the northern part of Manitoba.

In 1906 the total quantity of gypsum mined was 492,759 short tons, of which 28,831 tons are reported as having been calcined. The total quantity mined in 1905 was 443,569 short tons, of which 26,855 tons were calcined.

The figures of production as given in table 1 represent the total sales and shipments of crude, ground and calcined gypsum, which in 1906 were 469,022 tons valued at \$643,294, as compared with total sales in 1905 of 442,158 tons valued at \$586,168, showing an increase in 1906 of 26,864 tons or 6 per cent in quantity, and of \$56,126 or 9·7 per cent in value.

The production during the past two or three years has shown an important growth, and the output is now double what it was in 1898.

The average price of the crude gypsum shipped in 1906 was \$1.07 per short ton, as compared with an average of 99 cents in 1905 and 76 cents in 1904.

TABLE 1
GYPSUM.
ANNUAL PRODUCTION.

Calendar Year.	Tons.	Value.	Average price per ton.
1886.....	162,000	\$178,742	\$ 1.10
1887.....	154,008	157,277	1.02
1888.....	175,887	179,393	1.01
1889.....	213,273	205,108	0.96
1890.....	226,509	194,033	0.86
1891.....	203,605	206,251	1.01
1892.....	241,048	241,127	1.00
1893.....	192,568	196,150	1.02
1894.....	223,631	202,031	0.90
1895.....	226,178	202,608	0.89
1896.....	207,032	178,061	0.86
1897.....	239,691	244,531	1.02
1898.....	219,256	232,515	1.06
1899.....	244,566	257,329	1.05
1900.....	252,101	259,009	1.02
1901.....	293,799	340,148	1.16
1902.....	333,599	379,479	1.14
1903.....	314,489	388,459	1.24
1904.....	345,961	373,474	1.08
1905.....	442,158	586,168	1.32
1906 { Crude Gypsum.....	442,132	473,960	1.07
Ground Gypsum.....	3,195	9,823	3.07
Plaster of Paris, and wall plaster.....	23,695	159,511	6.73
Total.....	469,022	643,294	1.57

SESSIONAL PAPER No. 26b

TABLE 2.
GYPSUM.
ANNUAL PRODUCTION BY PROVINCES.

CALENDAR YEAR.	NOVA SCOTIA.		N. BRUNSWICK.		ONTARIO.		MANITOBA.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
		\$		\$		\$		\$
1887... ..	116,346	116,346	29,102	29,216	8,560	11,715		
1888 .. .	124,818	120,429	44,369	48,764	6,700	10,200		
1889.....	165,025	142,850	40,866	49,130	7,382	13 128		
1890.....	181,285	154,972	39,024	30,986	6,200	8,075		
1891.....	161,934	153,955	36,011	33,996	5,660	18,300		
1892.....	197,019	170,021	39,709	65,707	4,320	5,399		
1893	152,754	144,111	36,916	41,846	2,898	10,193		
1894.....	168,300	147,644	52,962	48,200	2,369	6,187		
1895. ..	156,809	133,929	66,949	63,839	2,420	4,840		
1896	136,590	111,251	67,137	59,024	3,305	7,786		
1897.....	155,572	121,754	82,658	118,116	1,461	4,661		
1898.....	132,086	106,610	86,083	121,704	1,087	4,201		
1899.....	126,754	102,055	116,792	151,296	1,020	3,978		
1900.....	138,712	108,828	112,294	145,850	1,095	4,331		
1901.....	170,100	136,947	121,595	189,709	1,504	5,692	600	7,800
1902	206,087	181,425	124,041	170,153	1,917	7,699	1,554	20,202
1903.	189,427	173,881	119,182	172,080	2,720	21,988	3,160	20,510
1904	218,580	153,600	190,991	187,524	2,390	18,350	4,000	14,000
1905	272,252	298,248	163,553	232,586	1,853	23,834	4,500	31,500
1906.....	333,312	345,414	131,246	250,960	2,965	24,420	3,200	22,500

The greater part of the gypsum mined in Nova Scotia is shipped in the crude state, though a small quantity is ground or calcined by the Windsor Plaster Company at Windsor, N.S. The total sales during the year in this Province were 333,312 tons valued at \$345,414, which is an increase of 61,060 tons over the sales during 1905.

The older quarries at Windsor and Walton have not only increased their shipments, but the Victoria Gypsum Mining and Manufacturing Co., which has been developing a property at St. Anns, C.B., for several seasons, has reached the shipping stage and made an important contribution to the output.

At Amherst also the Maritime Gypsum Co. have commenced shipping from the quarry which they have opened in this vicinity. From the Province of New Brunswick the total shipments of crude and calcined gypsum, etc., were 131,246 tons valued at \$250,960, of which 113,972 tons were crude gypsum and 17,274 calcined and ground. Compared with the shipments of 1905 and 1904 a considerable decrease in output is evidenced. The production is derived mainly from the deposits at Hillsborough, Albert county, in which the most important operator is the Albert Manufacturing Company; while a small production is annually made from the deposits on the Tobique river.

In Ontario small quantities of gypsum have as usual been mined from deposits found along the Grand river. The product is chiefly utilized in the manufacture of wall plaster and alabastine, etc.

In Manitoba the gypsum is quarried north of Lake St. Martin and shipped to Winnipeg, where it is calcined for use as wall plaster by the Manitoba Gypsum Co., Ltd.

Statistics of exports and imports of gypsum products as compiled from the Trade and Navigation reports are shown in tables 3, 4 and 5, following :—

TABLE 3.
GYPSUM.
EXPORTS OF CRUDE GYPSUM.

Calen- dar Year.	NOVA SCOTIA.		NEW BRUNSWICK.		ONTARIO.		TOTAL.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
		\$		\$		\$		\$
1874	67,830	68,164	.....	.....	.....	.....	67,830	68,164
1875	86,065	86,193	5,420	5,420	.....	.....	91,485	91,613
1876	87,720	87,590	4,925	6,616	120	180	92,765	94,386
1877	106,950	93,867	5,030	5,030	.....	.....	111,980	98,897
1878	88,631	76,695	16,335	16,435	489	675	105,455	93,805
1879	95,623	71,353	8,791	8,791	579	720	104,993	80,864
1880	125,685	111,833	10,375	10,987	875	1,240	136,935	124,060
1881	110,303	100,284	10,310	15,025	657	1,040	121,270	116,349
1882	133,426	121,070	15,597	24,581	1,249	1,946	150,272	147,597
1883	145,448	132,834	20,242	35,557	462	837	166,152	169,228
1884	107,653	100,446	21,800	32,751	688	1,254	130,141	134,451
1885	81,887	77,898	15,140	27,730	525	787	97,552	106,415
1886	118,985	114,116	23,498	40,559	350	538	142,833	155,213
1887	112,557	106,910	19,942	39,295	225	337	132,724	146,542
1888	124,818	120,429	20	50	670	910	125,508	121,389
1889	146,204	142,850	31,495	50,862	483	692	178,182	194,404
1890	145,452	139,707	30,034	52,291	205	256	175,691	192,254
1891	143,770	140,438	27,536	41,350	5	7	171,311	181,795
1892	162,372	157,463	27,488	43,623	.....	.....	189,860	201,086
1893	132,131	122,556	30,061	36,706	.....	.....	162,192	159,262
1894	119,569	111,586	40,843	46,538	.....	.....	160,412	158,124
1895	133,369	125,651	56,117	67,593	.....	.....	189,486	193,244
1896	116,331	109,054	64,946	77,535	.....	.....	181,277	186,589
1897	122,984	116,665	66,222	80,485	.....	.....	189,206	197,150
1898	99,215	93,474	70,399	81,433	.....	.....	169,614	174,907
1899	104,795	99,984	96,831	108,094	*1½	12	201,626	208,090
1900	.....	.....	.....	.....	.....	.....	188,262	201,912
1901	.....	.....	.....	.....	.....	.....	236,247	231,594
1902	.....	.....	.....	.....	.....	.....	289,600	295,215
1903	.....	.....	.....	.....	.....	.....	287,496	311,580
1904	.....	.....	.....	.....	.....	.....	298,211	316,436
1905	.....	.....	.....	.....	.....	.....	359,246	388,474
1906	.....	.....	.....	.....	.....	.....	404,464	462,814

*Exported from British Columbia.

TABLE 4.
GYPSUM.
EXPORTS OF GROUND GYPSUM.

Calendar Year.	Nova Scotia.	New Brunswick.	Ontario.	Total.
	\$	\$	\$	\$
1890.....	.....	.....	.....	105
1891.....	.....	.....	.....	588
1892.....	.....	.....	.....	20,255
1893.....	.....	.....	.....	22,132
1894.....	2,124	17,930	.....	20,054
1895.....	3,364	18,827	42	22,233
1896.....	1,270	19,246	751	21,267
1897.....	1,655	5,024	84	6,763
1898.....	1,548	4,900	.....	6,448
1899.....	205	7,898	20	8,123
1900.....	.....	.....	.....	19,834
1901.....	.....	.....	.....	15,337
1902.....	.....	.....	.....	5,101
1903.....	.....	.....	.....	12,457
1904.....	.....	.....	.....	2,333
1905.....	.....	.....	.....	2,673
1906.....	.....	.....	.....	2,934

TABLE 5.

GYPSUM.

IMPORTS OF GYPSUM, ETC.

Fiscal Year.	Crude Gypsum.		Ground Gypsum.		Plaster of Paris.	
	Tons.	Value.	Pounds.	Value.	Pounds.	Value.
1880.....	1,854	\$3,203	1,606,578	\$ 5,948	667,676	\$ 2,376
1881.....	1,731	3,442	1,544,714	4,676	574,006	2,864
1882.....	2,132	3,761	759,460	2,576	751,147	4,184
1883.....	1,384	3,001	1,017,905	2,579	1,448,650	7,867
1884.....		3,416	687,432	1,936	782,920	5,226
1885.....	1,353	2,354	461,400	1,177	689,521	4,809
1886.....	1,870	2,429	224,119	675	820,273	5,463
1887.....	1,557	2,492	13,266	73	594,146	4,342
1888.....	1,236	2,193	106,068	558	942,338	6,662
1889.....	1,360	2,472	74,390	372	1,173,996	8,513
1890.....	1,050	1,928	434,400	2,136	693,435	6,004
1891.....	376	640	36,500	215	1,035,605	8,412
1892.....	626	1,182	310,250	2,149	1,166,200	5,595
1893.....	496	1,014	140,830	442	552,130	3,143
1894.....		1,660	23,270	198	422,700	2,386
1895.....	603	960	20,700	88	259,200	1,619
1896.....	1,045	848	64,500	198	297,000	2,000
1897.....		772	45,000	123	969,900	4,489
1898.....	1,147	1,742	35,700	293	329,600	2,025
1899.....	325	692	33,900	338	496,300	3,120
1900.....	77	958	6,300	69	849,100	6,492
1901.....	286	1,125	65,400	1,097	502,200	3,978
1902.....	541	1,697	56,700	249	475,300	2,641
1903.....	1,076	2,187	68,700	228	630,800	3,599
1904.....	249	663	106,800	559	625,100	2,885
1905.....	2,344	7,386	2,255,700	2,681	7,924,100	37,643
1906.....	6,332	22,008	*1,968,600	1,799	12,866,500	43,742

*Equivalent to 6,562 barrels.

Crude gypsum, duty free. Ground gypsum, duty 15%. Plaster of Paris, duty 12½c. per 100 lbs.

MANGANESE.

Manganese was formerly an important mineral product in Nova Scotia and New Brunswick. In recent years, however, there has been but little mining of the mineral, what output there was, coming from the working over of old dumps. No direct returns of production were received during the past two years. The Customs Department reports an export of manganese ore during 1905 of 22 tons, and during 1906 of 93 tons. These figures have been utilized to represent the production. Statistics showing the production and exports of manganese ore are shown in tables 1 and 2, while the imports of oxide of manganese are shown in table 3.

TABLE 1.

MANGANESE.

ANNUAL PRODUCTION.

Calendar Year.	Tons.	Value.	Value per ton.
1886	1,789	\$41,499	\$23.20
1887	1,245	43,658	35.07
1888	1,801	47,944	26.62
1889	1,455	32,737	22.50
1890	1,328	32,550	24.51
1891	255	6,694	26.25
1892	115	10,250	89.13
1893	213	14,578	68.44
1894	74	4,180	56.49
1895	125	8,464	67.71
1896*	123½	3,975	32.19
1897*	15½	1,166	76.46
1898	50	1,600	32.00
1899	1,581	20,004	12.65
1900	30	1,800	60.00
1901*	440	4,820	10.95
1902*	172	4,062	23.62
1903	91	2,775	30.49
1904	66	2,740	41.51
1905	22	1,720	78.18
1906*	93	925	9.95

* Exports.

TABLE 2.
MANGANESE.
EXPORTS OF MANGANESE ORE.

CALENDAR YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		TOTAL.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
1873.....		.....	1,031	\$20,192	1,031	\$20,192
1874.	6	\$ 12	776	16,961	782	16,973
1875.....		200	194	5,314	203	5,514
1876.....	21	723	391	7,316	412	8,039
1877.....	106	3,699	785	12,210	891	15,909
1878.....	106	4,889	520	5,971	626	10,860
1879.....	154	7,420	1,732	20,016	1,886	27,436
1880.....	79	3,090	2,100	31,707	2,179	34,797
1881.....	200	18,022	1,504	22,532	1,704	40,554
1882.	123	11,520	771	14,227	894	25,747
1883.....	313	8,635	1,013	16,708	1,326	25,343
1884.....	134	11,054	469	9,035	603	20,089
1885.....	77	5,054	1,607	29,595	1,684	34,649
1886.....	(a) 441	30,854	1,377	27,484	(a) 1,818	58,338
1887.	578	14,240	837	20,562	1,415	34,802
1888.....	87	5,759	1,094	16,073	1,181	21,832
1889.	59	3,024	1,377	26,326	1,436	29,350
1890.....	177	2,583	1,729	34,248	1,906	36,831
1891.....	22	563	233	6,131	255	6,694
1892.	84	6,180	59	2,025	143	8,205
1893.....	123	12,409	10	112	133	12,521
1894.....	11	720	45	2,400	56	3,120
1895.....	108	6,348	³ / ₁₆	3	108 ³ / ₁₆	6,351
1896.	123 ¹ / ₂	3,975			123 ¹ / ₂	3,975
1897.	15 ¹ / ₄	1,166			15 ¹ / ₄	1,166
1898.....	11	325			11	325
1899.....	67	2,328	3	82	70	2,410
1900.....					34	1,720
1901.....					440	4,820
1902.....					172	4,062
1903.....					135	1,889
1904.....					123	2,706
1905.....					22	1,720
1906.....					93	925

(a) 250 tons from Cornwallis should more correctly be classed under the heading of mineral pigments.

TABLE 3.
MANGANESE.
IMPORTS : OXIDE OF MANGANESE.

Fiscal Year.	Pounds.	Value.	Fiscal Year.	Pounds.	Value.
1884.....	3,989	\$ 258	1895.....	64,151	\$2,781
1885.....	36,778	1,794	1896.	108,590	4,075
1886.....	44,967	1,753	1897.....	70,663	2,741
1887.....	59,655	2,933	1898....	130,456	5,047
1888.....	65,014	3,022	1899.....	141,356	5,539
1889.....	52,241	2,182	1900.....	126,725	4,155
1890.....	67,452	3,192	1901.....	272,134	8,176
1891.....	92,087	3,743	1902.....	176,331	5,360
1892.....	76,097	3,530	1903.....	279,611	8,051
1893.....	94,116	3,696	1904.....	275,696	7,051
1894.....	101,863	4,522	1905.....	235,289	6,832
			1906 Duty Free...	244,620	5,508

MICA.

Mica mining has become an important industry in Eastern Canada in both the Provinces of Ontario and Quebec. In the former Province mining at present is carried on chiefly in the district immediately north of the city of Ottawa, in the townships of Hull, Templeton and Wakefield, etc., while in Ontario the chief mines are located in the counties of Frontenac, Lanark and Leeds. The mica is used largely in the manufacture of electrical machinery and appliances ; to such an extent in fact that, several of the large electrical manufacturing companies have become directly interested in the mining of the mineral. The principal market for the Canadian product is in the United States, although important quantities are now being exported to Europe, where Canadian mica comes in competition with mica from India.

The annual statistics of production which have been published have been somewhat unsatisfactory for several reasons. In the first place there has been a considerable production of mica by small operators who sell to regular buyers, but of which it is difficult to obtain satisfactory record, and in the next place, and of greater importance, the value of the mica suffers a wide variation from the rough cobbled condition in which it leaves the mine to the prepared and selected mica as it leaves the trimming factories. In many cases returns received from operators show the value of the rough cobbled mica only, while in others the product is valued according to the condition in which it is sold. There are also frequently large stocks of mica carried over from one year to another, awaiting a favourable turn in the market. It may be safely assumed, therefore, that the published statistics do not represent the full value of the mica as it leaves the country.

Returns from producers in 1906 showed total shipments of 574 tons valued at \$303,913, or an average value per ton of \$529.46 as follows, by provinces :—

Province.	Tons.	Value.	Value per ton.
Quebec	283	\$ 159,334	\$ 563.02 ;
Ontario.....	291	144,579	495.84 ;
Total.. ..	574	\$ 303,913	\$ 529.46.

The average value per ton from individual mines ranged from \$208 to \$806.

The exports of mica according to Customs Department statistics were, during the calendar year 1906, as follows :—

	Tons.	Value.	Average Value per ton.
To Great Britain.....	167	\$ 58,735	\$ 351.71
To United States.....	735	519,479	706.77
To other countries.....	10	3,705	370.50
Total.....	912	\$ 581,919	\$ 638.07

The imports of mica into the United States from Canada, according to the United States reports on “Commerce and Navigation”, were, during the 12 months ending June 1906, 539 tons valued at \$328,991, or an average of \$610.37 per ton ; and during the 12 months ending June 1907, 766 tons valued at \$596,321, or an average of \$777.48 per ton.

The statistics of the production of mica in Quebec and Ontario, as collected and published by the Provincial Bureaus, are as follows :—

Quebec*—

	Pounds.	Value.	Average Value per lb.
Mica cutting $\frac{1}{8}$ inch.....	106,478	\$ 13,327	\$0.125
".....	112,896	20,755	.183
".....	75,968	30,048	.395
".....	65,565	36,232	.552
".....	25,956	18,061	.695
".....	9,512	8,891	.934
".....	923	760	.823
Total.....	397,298	\$128,074	.322
Split mica.....	72,788	22,973	.315
To this must be added 87 tons of rough-culled mica which we estimate as having yielded about 60,000 lbs. of merchantable mica.....		17,840	.297
Total... ..	530,086	\$168,887	

* Mining operations in the Province of Quebec 1906, J. Obalski.

Ontario—

According to the Report of the Ontario Bureau of Mines, the production of rough cobbled mica in Ontario in 1906 was 355 tons valued at \$69,041, or an average of \$194 per ton.

TABLE 1.
MICA.
ANNUAL PRODUCTION.

Calendar Year.	Value.	Calendar Year.	Value.
1886.....	\$ 29,008	1897.	\$ 76,000
1887.... .	29,816	1898.....	118,375
1888.....	30,207	1899.....	163,000
1889.....	28,718	1900.....	166,000
1890.... .	68,074	1901.....	160,000
1891.....	71,510	1902.....	135,904
1892.....	104,745	1903.....	177,857
1893.....	75,719	1904.....	160,777
1894.....	45,581	1905.....	178,235
1895.....	65,000	1906, 912 tons....	303,913
1896.	60,000		

TABLE 2.
MICA.
EXPORTS.

Calendar Year.	Value.	Calendar Year.	Value.
1887.....	\$ 3,480	1897.....	\$ 69,101
1888.....	23,563	1898.....	110,507
1889.	30,597	1899.....	153,002
1890.....	22,468	1900.....	146,750
1891.	37,590	1901.....	152,553
1892.....	86,562	1902. ..	(a) 391,812
1893.....	70,081	1903.....	196,020
1894.....	38,971	1904. .	198,482
1895.....	48,525	1905.....	179,049
1896.....	47,756	1906.....	581,919

(a) Probably includes some material manufactured from mica.

TABLE 3.
MICA.

* IMPORTS OF MICA INTO THE UNITED STATES FROM CANADA, YEARS ENDING
JUNE 30.

Fiscal Year.	Pounds.	Value.
1895.....	546,905	\$ 39,637
1896.....	570,750	53,719
1897.....	404,080	53,399
1898.....	465,779	53,854
1899.....	1,024,098	131,310
1900.....	1,097,067	136,981
1901.....	967,904	161,741
1902.....	854,167	184,287
1903.....	834,035	196,456
1904.....	573,035	137,191
1905.....	506,917	121,560
1906.....	1,078,267	328,991
1907.....	.....	596,322

* The Foreign Commerce and Navigation of the United States.

MINERAL PIGMENTS.

The production of ochres and barytes only are included under this heading.

OCHRES.

The production of ochres in 1906 was 6,758 tons valued at \$36,125, as compared with 5,195 tons in 1905 valued at \$34,675. With the exception of 18 tons in 1906 all the output was derived from the iron oxide deposits near Three Rivers, Champlain county, Que. Only a portion of the output in this district is used for the manufacture of paint: 2,262 short tons valued at \$30,005 were so used in 1906; the balance, 4,480 tons valued at \$6,000, representing the crude iron oxide which is shipped to several cities in Canada and exported to the United States and used in the purification of gas.

The firms mining ochres are as follows :—

Canada Paint Co., Montreal, Que.

Champlain Oxide Co., Three Rivers, Que.

Thomas H. Argall, “ “

Ontario Mineral Paint Works, Campbellville, Ont.

TABLE 1.

MINERAL PIGMENTS.

ANNUAL PRODUCTION OF OCHRES.

Calendar Year.	Tons.	Value.
1886.	350	\$ 2,350
1887.	485	3,733
1888.	397	7,900
1889.	794	15,280
1890.	275	5,125
1891.	900	17,750
1892.	390	5,800
1893.	1,070	17,710
1894.	611	8,690
1895.	1,339	14,600
1896.	2,362	16,045
1897.	3,905	23,560
1898.	2,226	17,450
1899.	3,919	20,000
1900.	1,966	15,398
1901.	2,233	16,735
1902.	4,955	30,495
1903.	6,266	32,760
1904.	3,925	24,995
1905.	5,105	34,675
1906.	6,758	36,125

TABLE 2.
MINERAL PIGMENTS.
IMPORTS OF OCHRES.

Fiscal Year.		Pounds.	Value.
1880.....		571,454	\$ 6,544
1881.....		677,115	8,972
1882.....		731,526	8,202
1883.....		898,376	10,375
1884.....		533,416	6,398
1885.....		1,119,177	12,782
1886.....		1,100,243	12,267
1887.....		1,460,128	17,067
1888.....		1,725,460	17,664
1889.....		1,342,783	12,994
1890.....		1,394,811	14,066
1891.....		1,528,696	20,550
1892.....		1,708,645	22,908
1893.....		1,968,645	23,134
1894.....		1,358,326	18,951
1895.....		793,258	12,048
1896.....		1,159,494	16,954
1897.....		1,504,044	18,504
1898.....		2,126,592	26,307
1899.....		2,444,698	31,092
1900.....		2,474,537	32,017
1901.....		2,092,067	27,267
1902.....		2,530,743	33,909
1903.....		3,215,346	42,243
1904.....		2,767,580	36,636
1905.....		3,122,690	35,887
1906 { Ochres and ochrey earths and raw siennas.....		Duty.	
		20 p. c.	1,762,682 \$ 23,790
		25 "	2,558,848 33,607
Total, 1906.....		.....	4,321,530 \$57,397

TABLE 3.
MINERAL PIGMENTS.
EXPORTS OF MINERAL PIGMENTS, IRON OXIDES ETC.

Calendar Year.	Tons.	Value.
1897.....	512	\$7,706
1898.....	283	4,227
1899.....	308	5,408
1900.....	651	7,154
1901.....	401	8,233
1902.....	352	6,182
1903.....	676	12,770
1904.....	416	7,260
1905.....	353	7,704
1906.....	139	2,379

BARYTES.

The mining of barytes was continued during 1906 by the Ainslie Mining and Railway Company of Halifax at their property at Lake Ainslie, C.B. Total shipments in 1906 were 4,000 tons valued at the mine at \$12,000.

The barytes deposits at Five Islands, Colchester county, Nova Scotia, were being reopened and developed by Messrs. Bayne and Soley Bros., who expected to be able to make shipments in 1907.

TABLE 4.
MINERAL PIGMENTS.
ANNUAL PRODUCTION OF BARYTES.

Calendar Year.	Tons.	Value.
1885.....	300	\$ 1,500
1886.....	3,864	19,270
1887.....	400	2,400
1888.....	1,100	3,850
1889.....		
1890.....	1,842	7,543
1891.....		
1892.....	315	1,260
1893.....		
1894.....	1,081	2,830
1895.....		
1896.....	145	715
1897.....	571	3,060
1898.....	1,125	5,533
1899.....	720	4,402
1900.....	1,337	7,605
1901.....	653	3,842
1902.....	1,096	3,957
1903.....	1,163	3,931
1904.....	1,382	3,702
1905.....	3,360	7,500
1906.....	4,000	12,000

TABLE 5.
MINERAL PIGMENTS.
IMPORTS OF BARYTES.

Fiscal Year.	Cwt.	Value.
1880.....	2,230	\$ 1,525
1881.....	3,740	1,011
1882.....	497	303
1883.....		185
1884.....		229
1885.....	7	14
1886.....		62
1887.....	379	676
1888.....	236	214
1889.....	1,332	987
1890.....	1,322	978

TABLE 6.

MINERAL PIGMENTS.

MISCELLANEOUS IMPORTS, FISCAL YEAR, 1906.

	Duty.	Quantity.	Value.
Paints and colours, rough stuff and fillers, anti-corrosive and anti-fouling paints commonly used for ship hulls, N.E.S	Lbs. 25 p. c.	4,732,911	\$ 275,703
Paris green, dry	" 10 "	156,748	34,658
Paints and colours ground in spirits, and all spirit varnishes and lacquers. Gals.	\$1.12½ per gallon ..	849	2 765
Putty	Lbs. 20 p. c.	246,980	3,862
Total .....	.....	.....	316,988

MINERAL WATERS.

As has been stated in previous reports the following figures of production of mineral waters must be taken more or less as approximations. At a number of places in Canada where mineral springs occur, the waters are being used for drinking or bathing, and are also bottled and sold in considerable quantity. At several points hotels have been erected near springs, the waters of which are claimed to have curative properties. No data are available of the quantities thus used locally. It is, therefore, very difficult to obtain returns which would enable accurate statistics of the industry to be compiled.

TABLE 1.

MINERAL WATERS.

ANNUAL PRODUCTION.

Calendar Year.	Gallons.	Value.	Calendar Year.	Gallons.	Value .
1888.....	124,850	\$11,456	1898.....	555,000	\$100,000
1889.....	424,600	37,360	1899....		100,000
1890.....	561,165	66,031	1900.....		75,000
1891.....	427,485	54,268	1901....		100,000
1892.....	640,380	75,348	1902.....		100,000
1893.....	725,096	108,347	1903.....		100,000
1894.....	767,460	110,040	1904.....		100,000
1895.....	739,382	126,048	1905....		100,000
1896.....	706,372	111,736	1906.....		100,000
1897.....	749,691	141,477			

TABLE 2.

MINERAL WATERS.

IMPORTS.

Fiscal Year.		Value.
1880		\$41,797
1881		55,763
1882		57,953
1883		49,546
1884		48,613
1885		55,864
1886		47,006
1887		52,989
1888		54,891
1889		66,331
1890		71,521
1891		15,721
1892		17,913
1893		27,909
1894		28,130
1895		27,879
1896		32,674
1897		22,142
1898		33,314
1899		38,046
1900		30,343
1901		40,802
1902		91,871
1903		108,130
1904		137,304
1905		161,790
1906 { Mineral waters, natural, not in bottle..... .Duty free..		\$ 1,754
{ Mineral and aerated waters..... " 20 p. c.		176,885
Total.....		\$178,639

NATURAL GAS.

Natural gas is commercially utilized in Canada in the southern peninsula of the Province of Ontario, and at the town of Medicine Hat, Alberta. The total sales in 1906 show a considerable enlargement over the sales in 1905, due chiefly to the development of the Haldimand County field in Ontario. The total value of the sales of gas in 1906 was returned as \$583,523, as compared with a value of \$379,561 in 1905, an increase of \$203,962 or 53·7 p. c. Of the total sales in 1906 gas to the value of \$532,823 was produced in Ontario, and \$50,700 is the estimated value of the gas produced and utilized at Medicine Hat.

The number of wells supplying gas during 1906 is returned as 357 in Ontario, and 7 in Alberta. Companies making returns of gas production report 102 producing wells and 16 non-producing wells bored during the year.

Statistics of the value of the annual production of natural gas are shown in the following table :—

TABLE 1.
NATURAL GAS.
ANNUAL PRODUCTION.

Calendar Year.	Value.
1892.....	\$ 150,000
1893.....	376,233
1894.....	313,754
1895.....	423,032
1896.....	276,301
1897.....	325,873
1898.....	322,123
1899.....	387,271
1900.....	417,094
1901.....	339,476
1902.....	195,992
1903.....	202,210
1904.....	328,376
1905.....	379,561
1906.....	583,523

PETROLEUM.

The production of crude petroleum in Canada is still confined to the Province of Ontario ; the exploration of other oil fields, notably in southern Alberta and British Columbia, on Manitoulin island, Ontario, in New Brunswick and in Gaspé, Quebec, not having yet resulted in any important commercial development.

During the session of 1904 of the Dominion Parliament an act was passed providing for the payment of a bounty of one and a half cents per gallon on all crude petroleum produced from wells in Canada. As the quantity of oil on which bounty has been paid during the year will probably represent most closely the actual output, this figure has been taken as the production during the past two years.

On this basis then the production of crude oil during 1906 was 19,941,357 gallons (569,753 barrels), as compared with 22,193,336 gallons (634,095 barrels) in 1905, showing a falling off of 64,342 barrels or 10 p. c. The average monthly price per barrel was a'most the same in 1906 as in 1905.

The record of production in former years was obtained in other ways ; for the years 1901 to 1904 inclusive, the production is based on the receipts of Canadian crude oil at refineries to which was added an estimate of the quantity sold directly for fuel and other purposes ; for the years previous to 1901 the production of crude oil was obtained from government inspection returns, by assuming a ratio of crude to refined, and the statistics of production on this basis will be found in table 2.

The annual production of crude oil since 1901, showing the quantity, value and average value per barrel is given in table 1 following :—

TABLE 1.

Further details of production during the past six years are as follows :—

Crude Oil.	1901.	1902.	1903.	1904.
	Bls.	Bls.	Bls.	Bls.
Received at refineries	508,677	443,333	410,280	455,074
Direct sales for industrial purposes	113,715	87,291	76,357	48,400
Total sales of crude oil	622,392	530,624	486,637	503,474
Total sales in gallons	21,783,720	18,571,840	17,032,295	17,621,590

Production calculated on the basis of the bounty of 1½c. per gallon paid by the Dominion Government.	1905.	1906.
Bounty paid.....	\$332,900	\$299,120
Production of crude oil represented. . .	22,193,336 gals.	19,941,357 gals.
Production of crude in barrels.....	634,095 bls.	569,753 bls.

The following tables illustrate the petroleum industry of Canada by giving the exports, imports, returns of inspection and other data :—

TABLE 1.
PETROLEUM.
ANNUAL PRODUCTION OF CRUDE PETROLEUM SINCE 1901.

Year.	Barrels of 35 gallons.	Value.	Average price per barrel.
1901..	622,392	\$1,008,275	\$1.62
1902.....	530,624	951,190	1.79½
1903.....	486,637	1,048,974	2.15½
1904.....	503,474	935,895	1.858
1905.....	634,095	856,028	1.35
1906.....	569,753	761,760	1.337

TABLE 2.
PETROLEUM.
CANADIAN OILS AND NAPHTHA INSPECTED, AND CORRESPONDING QUANTITIES OF CRUDE OIL.

Calendar Year.	Refined Oils Inspected.	Crude Equivalent Calculated.	Ratio of Crude to Refined.	Equivalent in Barrels of 35Gallons.	Average Price per Barrel of Crude.	Value of Crude Oil.
	Gallons.	Gallons.				
1881. . . .	6,457,270	12,914,540	100:50	368,987		
1882. . . .	6,135,782	13,635,071	100:45	389,573		
1883. . . .	7,447,648	16,550,328	100:45	472,866		
1884.....	7,993,995	19,984,987	100:40	571,000		
1885. . . .	8,225,882	20,564,705	100:40	587,563		
1886.....	7,768,006	20,442,121	100:38	584,061	\$0 90	\$525,655
1887. . . .	9,492,588	24,980,494	100:38	713,728	0 78	556,708
1888.....	9,246,176	24,332,042	100:38	695,203	1 02½	713,695
1889... .	9,472,476	24,664,144	100:38	704,690	0 92½	653,600
1890. . . .	10,174,894	26,776,037	100:38	795,030	1 18	902,734
1891. . . .	10,065,463	26,435,430	100:38	755,298	1 33¾	1,010,211
1892. . . .	10,370,707	27,291,334	100:38	779,753	1 26¼	984,438
1893.....	10,618,804	27,944,221	100:38	798,406	1 09½	874,255
1894. . . .	11,027,982	29,018,637	100:38	829,104	1 00½	835,322
1895. . . .	10,674,232	25,414,838	100:42	726,138	1 49½	1,086,738
1896.....	10,684,284	25,438,771	100:42	726,822	1 59	1,155,647
1897.....	10,434,878	24,844,995	100:42	709,857	1 42½	1,011,546
1898. . . .	11,148,348	26,543,685	100:42	758,391	1 40	1,061,747
1899.....	11,927,981	28,399,955	100:42	808,570	1 48½	1,202,020
1900.....	13,428,422	24,867,449	100:54	710,498	1 62	1,151,007

TABLE 3.

PETROLEUM.

VALUE OF THE PRODUCTION OF CANADIAN OIL REFINERIES.

Calendar Year.	Value.	Calendar Year.	Value.
1887.....	\$1,288,109	1897.....	\$1,672,425
1888.....	1,401,459	1898.....	1,825,265
1889.....	1,414,184	1899.....	1,490,870
1890.....	1,638,420	1900.....	1,620,705
1891.....	1,534,509	1901.....	1,251,373
1892.....	1,782,365	1902.....	1,222,641
1893.....	1,675,784	1903.....	1,302,104
1894.....	1,567,134	1904.....	975,840
1895.....	1,806,237	1905.....	(a) 1,815,525
1896.....	1,876,913	1906.....	(a) 2,120,343

(a) Derived from both Canadian and imported crude oils.

TABLE 4.

PETROLEUM.

TOTAL AMOUNT OF OIL INSPECTED, CANADIAN AND IMPORTED.

Fiscal Year.	Canadian.	Imported.	Total.	Canadian.	Imported.
	Gallons.	Gallons.	Gallons.	Per cent.	Per cent.
1881.....	6,406,783	476,784	6,883,567	93.1	6.9
1882.....	5,910,747	1,351,412	7,262,159	81.4	18.6
1883.....	6,970,550	1,190,828	8,161,378	85.4	14.6
1884.....	7,656,001	1,142,575	8,798,586	87.0	13.0
1885.....	7,661,617	1,278,115	8,939,732	85.7	14.3
1886.....	8,149,472	1,327,616	9,477,088	86.0	14.0
1887.....	8,243,962	1,665,604	9,909,566	83.2	16.8
1888.....	9,545,895	1,821,342	11,367,237	84.0	16.0
1889.....	9,462,834	1,767,812	11,230,646	84.3	15.7
1890.....	10,121,210	2,020,742	12,141,952	83.4	16.6
1891.....	10,270,107	2,022,002	12,292,109	83.6	16.4
1892.....	10,238,426	2,423,445	12,667,871	80.8	19.2
1893.....	10,683,806	2,641,690	13,325,496	80.2	19.8
1894.....	10,824,270	5,633,222	16,457,492	65.8	34.2
1895.....	10,936,992	5,650,994	16,587,986	65.9	34.1
1896.....	10,533,951	5,807,991	16,341,942	64.5	35.5
1897.....	10,506,526	6,248,743	16,755,269	62.7	37.3
1898.....	10,796,847	6,880,734	17,677,581	61.1	38.9
1899.....	11,005,804	7,232,348	18,238,152	60.3	39.7
1900.....	13,014,713	*8,216,207	21,230,920	61.3	38.7
1901.....	12,674,977	*9,232,165	21,907,142	57.9	42.1
1902.....	10,494,874	*10,916,396	21,411,270	49.0	51.0
1903.....	8,615,892	*14,479,176	23,095,068	37.3	62.7
1904.....	7,292,113	*17,369,930	24,662,043	29.6	70.4
1905.....	17,520,035	*10,284,053	27,804,088	63.0	37.0
1906.....	18,634,155	*9,255,200	27,889,355	66.8	33.2

* Item (a) table 5.

TABLE 5.

PETROLEUM.

EXPORTS OF CRUDE AND REFINED PETROLEUM.

Calendar Year.	Crude Oil.		Refined Oil.		Total.	
	Gallons.	Value.	Gallons.	Value.	Gallons.	Value.
1881	.....	.....	.....	.....	501	\$ 99
1882	.....	.....	.....	.....	1,119	286
1883	.....	.....	.....	.....	13,283	710
1884	.....	.....	.....	.....	1,098,090	30,168
1885	.....	.....	.....	.....	337,967	10,562
1886	.....	.....	.....	.....	241,716	9,855
1887	.....	.....	.....	.....	473,559	13,831
1888	.....	.....	.....	.....	196,602	74,542
1889	.....	.....	.....	.....	235,855	10,777
1890	.....	.....	.....	.....	420,492	18,154
1891	446,770	\$ 18,471	585	\$104	447,355	18,575
1892	310,387	12,945	1,146	100	311,533	13,045
1893	107,719	3,696	2,196	394	109,915	4,090
1894	53,985	2,773	5,297	513	59,282	3,286
1895	22,831	1,044	10,237	2,023	33,068	3,067
1896	601	101	7,489	999	8,090	1,100
1897	.....	.....	342	49	342	49
1898	96	4	12,735	3,001	12,831	3,005
1899	.....	.....	3,425	859	3,425	859
1900	40	2	8,559	394	8,599	2,396
1901	14,168	691	375	66	14,543	757
1902	400	40	626	146	1,026	186
1903	350	15	1,013	190	1,363	205
1904	4,207	213	2,126	470	6,333	683
1905	35	2	7,228	2,078	7,263	2,080
1906	900	141	8,938	1,401	9,838	1,542

TABLE 6.

PETROLEUM.

IMPORTS OF PETROLEUM AND PRODUCTS OF.

Fiscal Year.		Gallons.	Value.
			\$
1880.		687,641	131,359
1881.		1,437,475	262,168
1882.		3,007,702	398,031
1883.		3,086,316	358,546
1884.		3,160,282	380,082
1885.		3,767,441	415,195
1886.		3,819,146	421,836
1887.		4,290,003	467,003
1888.		4,523,056	408,025
1889.		4,650,274	484,462
1890.		5,075,650	515,852
1891.		5,071,386	498,330
1892.		5,649,145	475,732
1893.		6,002,141	446,389
1894.		6,597,108	439,988
1895.		7,577,674	525,372
1896.		8,005,891	735,913
1897.		8,415,302	697,169
1898.		9,074,311	724,519
1899.		10,394,208	763,303
1900.		9,633,647	864,833
1901.		11,082,822	982,640
1902.		13,220,005	1,107,207
1903.		18,799,312	1,643,371
1904.		24,521,115	2,152,623
1905.		35,296,332	2,151,514
Oils:--			
Mineral:		Duty.	Gallons. Value.
			\$
1906	(a) Coal and kerosene, distilled, purified or refined, naphtha and petroleum. N.E.S	2½c.p.gal.	9,255,200 812,226
	(b) Products of petroleum...	2½c. "	1,633,309 177,069
	(c) Crude petroleum, gas oils (other than benzine or gasoline).....	1½c. "	19,680 1,282
	Petroleum crude, fuel and gas oils (8233 specific gravity).....	Free.	19,805,656 667,172
	(d) Illuminating oils composed wholly or in part of the products of petroleum, coal, shale or lignite, costing more than 30 cents per gallon.....	20 p. c.	3,536 1,490
	(e) Lubricating oils composed wholly or in part of petroleum, costing less than 25 cents per gallon.....	2½c.p.gal.	1,907,029 248,938
Total.....			32,624,410 1,908,177

TABLE 7.*

PETROLEUM.

IMPORTS OF CRUDE AND MANUFACTURED OILS, OTHER THAN ILLUMINATING.

Fiscal Year.	Gallons.	Fiscal Year.	Gallons.
1881.....	960,691	1894.....	1,860,829
1882.....	1,656,290	1895.....	1,106,993
1883.....	1,895,488	1896.....	1,079,965
1884.....	2,017,707	1897.....	802,286
1885.....	2,489,326	1898.....	1,047,026
1886.....	2,491,530	1899.....	1,017,278
1887.....	2,624,399	1900.....	1,406,700
1888.....	2,701,714	1901.....	1,838,966
1889.....	2,882,462	1902.....	2,296,353
1890.....	3,054,908	1903.....	4,316,010
1891.....	3,049,384	1904.....	7,141,109
1892.....	3,047,199	1905.....	25,002,047
1893.....	1,481,749	1906.....	23,365,674

*The figures for the years from 1881 to 1894, inclusive, represent the total imports of petroleum and products, less the quantity of imported illuminating oils, inspected by the Inland Revenue Department. For 1895 and subsequent years, the table is composed of items (b), (c) and (e) of table 5.

TABLE 8.

PETROLEUM.

IMPORTS OF PARAFFINE WAX.

Fiscal Year.	Pounds.	Value.
1883.....	43,716	\$ 5,166
1884.....	39,010	6,079
1885.....	59,967	8,123
1886.....	62,035	7,953
1887.....	61,132	6,796
1888.....	53,862	4,930
1889.....	63,229	5,250
1890.....	239,229	15,844
1891.....	753,854	50,275
1892.....	733,873	48,776
1893.....	452,916	38,935
1894.....	208,099	15,704
1895.....	163,817	11,579
1896.....	150,287	10,042
1897.....	138,703	7,945
1898.....	103,570	5,987
1899.....	92,242	4,025
1900.....	47,400	3,529
1901.....	118,843	9,639
1902.....	225,885	12,750
1903.....	592,642	28,674
1904.....	418,967	18,440
1905.....	81,992	7,795
1906 (Duty, 25 p. c.) ..	112,612	9,721

TABLE 9.

PETROLEUM.

IMPORTS OF PARAFFINE WAX CANDLES.

Fiscal Year.	Pounds.	Value.	Fiscal Year.	Pounds.	Value.
1880.....	10,445	\$2,269	1894.....	10,818	\$1,685
1881.....	7,494	1,683	1895.....	19,448	2,541
1882.....	5,818	1,428	1896.....	25,787	4,072
1883.....	7,149	1,734	1897.....	25,114	2,929
1884.....	8,755	2,229	1898.....	60,802	4,427
1885.....	9,247	2,449	1899.....	62,331	5,856
1886.....	12,242	2,587	1900.....	27,663	3,671
1887.....	21,364	3,611	1901.....	44,562	3,588
1888.....	22,054	2,829	1902.....	51,120	5,752
1889.....	8,038	1,337	1903.....	83,377	9,025
1890.....	7,233	1,186	1904.....	83,471	9,078
1891.....	10,598	2,116	1905.....	137,353	15,293
1892.....	9,259	1,952	1906 (Duty, 25		
1893.....	8,351	1,735	p.c.).....	148,808	15,804

PHOSPHATE

The phosphate or apatite mined in Canada in recent years has been chiefly obtained as a by-product in the mining of mica, and the quantity has been comparatively small. In 1906 the production is, according to the authority of Mr. J. F. Higginson of Buckingham, estimated at 850 short tons valued at \$6,375, of which 600 tons were obtained from mines in the Province of Quebec, and 250 tons from Ontario.

At one time this mineral was mined to the extent of from 20,000 to 30,000 tons a year, but the production was displaced by the more cheaply mined phosphates of Carolina, Florida and Tennessee.

Statistics of production and exports are given in tables 1 and 2.

TABLE 1.

PHOSPHATE.

ANNUAL PRODUCTION.

Calendar Year.	Tons.	Average value per ton.	Value.
1886	20,495	\$14.85	\$304,338
1887.....	23,690	13.50	319,815
1888.....	22,485	10.77	242,285
1889.....	30,988	10.21	316,662
1890	31,753	11.37	361,045
1891.....	23,588	10.24	241,603
1892.....	11,932	13.20	157,424
1893	8,198	8.65	70,942
1894.....	6,861	6.00	41,166
1895.....	1,822	5.25	9,565
1896.....	570	6.00	3,420
1897	908	4.39	3,984
1898.....	733	5.00	3,665
1899.....	3,000	6.00	18,000
1900.....	1,415	5.02	7,105
1901	1,043	6.07	6,280
1902	856	5.79	4,953
1903.....	1,329	6.18	8,214
1904	817	5.62	4,590
1905.....	1,300	6.48	8,425
1906	850	7.50	6,375

TABLE 2.

PHOSPHATE.

EXPORTS.

Calendar Year.	Ontario.		Quebec.		Totals.	
	Tons.	*Value.	Tons.	*Value.	Tons.	*Value.
1878.....	824	\$12,278	9,919	\$195,831	10,743	\$208,109
1879.....	1,842	20,565	6,604	101,470	8,446	122,035
1880.....	1,387	14,422	11,673	175,664	13,060	190,086
1881.....	2,471	36,117	9,497	182,339	11,968	218,456
1882.....	568	6,338	16,585	302,019	17,153	308,357
1883.....	50	500	19,666	427,168	19,716	427,668
1884.....	763	8,890	20,946	415,350	21,709	424,240
1885.....	434	5,962	28,535	490,331	28,969	496,293
1886.....	644	5,816	19,796	337,191	20,460	343,007
1887.....	705	8,277	22,447	424,940	23,152	433,217
1888.....	2,643	30,247	16,133	268,362	18,776	298,609
1889.....	3,547	38,833	26,440	355,935	29,987	394,768
1890.....	1,866	21,329	26,591	478,040	28,457	499,369
1891.....	1,551	16,646	15,720	368,015	17,271	384,661
1892.....	1,501	12,544	9,981	141,221	11,482	153,765
1893.....	1,990	11,550	5,748	56,402	7,738	67,952
1894.....	1,980	10,560	3,470	29,610	5,450	40,170
1895.....			250	2,500	250	2,500
1896.....	1	5	299	2,990	300	2,995
1897.....	70	450	165	400	235	850
1898.....	21	240	702	8,000	723	8,240
1899.....	215	1,850	93	1,725	308	3,575
1900.....					Nil	Nil
1901.....					6	120
1902.....					70	1,880
1903.....					1	20
1904.....					191	5,348
1905.....					40	1,253
1906.....						

* These values do not compare with those in table 1 above ; the spot value is adopted for the production, whilst the exports are valued upon quite a different basis.

PYRITES.

Copper pyrites has been mined for many years in the Province of Quebec, at Capelton and Eustis, by the Nichols Chemical Co., and the Eustis Mining Co. A portion of this ore is used at Capelton in the manufacture of sulphuric acid, and the balance exported. The production in 1906 was 32,348 tons valued at \$129,392.

In Ontario, iron pyrites was mined by the American Madoc Mining Co., at Bannockburn and Tweed; by the British American Development Company near Queensboro; by the Lake Superior Power Co., at the Helen mine, Michipicoten; and by the North Land Mining Co., at Rib lake, on the Temiskaming and Northern Ontario railway.

The shipments were 10,395 tons valued at \$40,598. The total production of pyrites was, therefore, 42,743 tons valued at \$169,990, as compared with 33,339 tons valued at \$125,486 in 1905.

The exports of pyrites during 1906 were, according to Customs returns 26,050 tons valued at \$65,349.

Statistics of the production of pyrites, and of the imports of brimstone and sulphur, are given in tables 1 and 2.

TABLE 1.
PYRITES.
ANNUAL PRODUCTION.

Calendar Year.	Tons, 2,000 lbs.	Value.
		\$
1886.....	42,906	193,077
1887.....	38,043	171,194
1888.....	63,479	285,656
1889.....	72,225	307,292
1890.....	49,227	123,067
1891.....	67,731	203,193
1892.....	59,770	179,310
1893.....	58,542	175,626
1894.....	40,527	121,581
1895.....	34,198	102,594
1896.....	33,715	101,155
1897.....	38,910	116,730
1898.....	32,218	128,872
1899.....	27,687	110,748
1900.....	40,031	155,164
1901.....	35,261	130,544
1902.....	35,616	138,939
1903.....	33,982	127,713
1904.....	37,180	134,033
1905.....	33,339	125,486
1906.....	42,743	169,990

TABLE 2.

PYRITES.

IMPORTS : -BRIMSTONE AND CRUDE SULPHUR.

Fiscal Year.	Pounds.	Value.
		£
1880.....	1,775,489	27,401
1881.....	2,118,720	33,956
1882.....	2,375,821	40,329
1883.....	2,336,085	36,737
1884.....	2,195,735	37,463
1885.....	2,248,986	35,043
1886.....	2,922,043	43,651
1887.....	3,103,644	38,750
1888.....	2,048,812	25,318
1889.....	2,427,510	34,006
1890.....	4,440,799	44,276
1891.....	3,601,748	46,351
1892.....	4,769,759	67,095
1893.....	6,381,203	77,216
1894.....	5,845,463	61,558
1895.....	4,900,225	56,965
1896.....	6,934,190	63,973
1897.....	8,672,751	87,719
1898.....	38,026,798	373,786
1899.....	24,517,026	265,799
1900.....	21,128,656	215,433
1901.....	23,856,651	270,608
1902.....	24,640,735	325,307
1903.....	24,412,737	259,123
1904.....	19,364,730	204,663
1905.....	23,435,140	242,251
1906*.....	43,047,672	436,156

* Brimstone, crude, or in roll or flour, and sulphur in roll or flour.

SALT.

Salt production in Canada in 1906 was entirely from the Province of Ontario from the deposits in the counties of Essex, Lambton, Middlesex, Huron and Bruce. Returns from thirteen plants showed the total sales of salt as 76,762 tons valued at \$329,130, exclusive of packages which were valued at \$147,705. The stock on hand in manufacturers' hands at the end of the year was 6,365 tons. There were 210 men employed for various periods during the year, to whom \$92,000 was paid in wages.

In 1905 the sales were 67,340 tons valued at \$320,858, and the value of packages used was \$113,004. The Canadian Salt Company of Windsor is the chief operator, producing nearly 50 p. c. of the total output. The system of evaporation used by this firm is the compound double effect vacuum.

In 1896 a few tons of salt were produced at the south end of Lake Winnipegosis, Manitoba, but the industry has not been followed up in this district. Small quantities of brine have occasionally been evaporated at Plumweseep, New Brunswick, and sold locally along the line of the Intercolonial railway. These works have now been taken over by Wm. Harvie of London, England, and preparations are being made to renew the production of salt in this locality.

Annual statistics of salt production are shown in table 1. The exports of salt, which are of small amount, are shown in table 2. Tables 3 and 4 show the quantities and values of the salt imported. The value of salt imported on which duty is levied has ranged from \$20,000 to \$80,000 a year, the value in 1906 being \$59,805.

Salt imported from the United Kingdom, or any British possession, or imported for the use of the sea or gulf fisheries, is free of duty, and a large portion of the trade of Eastern Canada is supplied with salt imported under this class. The quantity imported duty free in 1906 was 101,540 tons valued at \$352,214.

TABLE 1.
SALT.
ANNUAL PRODUCTION.

Calendar Year.	Tons.	Value.
1886.....	62,359	\$227,195
1887.....	60,173	166,394
1888.....	59,070	185,460
1889.....	32,832	129,547
1890.....	43,754	198,857
1891.....	45,021	161,179
1892.....	45,486	162,041
1893.....	62,324	195,926
1894.....	57,199	170,687
1895.....	52,376	160,455
1896.....	43,960	169,693
1897.....	51,348	225,730
1898.....	57,142	248,639
1899.....	59,339	254,390
1900.....	62,055	279,458
1901.....	59,428	262,328
1902.....	64,456	292,581
1903.....	62,452	297,517
1904.....	69,477	321,778
1905.....	67,340	320,858
1906.....	76,720	329,130

TABLE 2.
SALT.
EXPORTS.

Calendar Year.	Bushels.	Value.
1880.....	467,641	\$46,211
1881.....	343,208	44,627
1882.....	181,758	18,350
1883.....	199,733	19,492
1884.....	167,029	15,291
1885.....	246,794	18,756
1886.....	224,943	16,886
1887.....	154,045	11,526
1888.....	15,251	3,987
1889.....	8,557	2,390
1890.....	6,605	1,667
1891.....	5,290	1,277
1892.....	2,000	504
1893.....	4,940	1,267
1894.....	4,639	1,120
1895.....	4,865	959
1896.....	3,842	899
1897.....	5,383	1,193
1898.....	5,202	1,252
1899.....	11,205	2,773
1900.....	37,653	8,997
1901.....	39,224	6,510
1902.....	9,331	3,798
	Pounds.	
1903.....	1,915,648	5,927
1904.....	1,006,036	4,186
1905.....	1,447,728	6,112
1906.....	618,707	3,437

TABLE 3.

SALT.

IMPORTS :—SALT PAYING DUTY.

Fiscal Year.	Pounds.	Value.	Fiscal Year.	Pounds.	Value.
1880.	726,640	\$ 3,916	1893.	21,377,339	\$79,838
1881.	2,588,465	6,355	1894.	15,867,825	53,336
1882.	3,679,415	12,318	1895.	8,498,404	29,881
1883.	12,136,968	36,223	1896.	7,665,257	24,550
1884.	12,770,950	38,949	1897.	11,911,766	33,470
1885.	10,397,761	31,726	1898.	11,068,785	32,792
1886.	12,266,021	39,181	1899.	11,781,453	32,839
1887.	10,413,258	35,670	1900.	11,028,337	30,180
1888.	10,509,799	32,136	1901.	11,625,688	34,087
1889.	11,190,088	38,968	1902.	13,892,849	39,605
1890.	15,135,109	57,549	1903.	14,554,693	41,785
1891.	15,140,827	59,311	1904.	29,779,183	73,826
1892.	18,643,191	65,963	1905.	18,473,868	58,056
			Duty.		
1906	{ Salt, coarse, N.E.S.		5c. per 100 lbs.	14,900,108	33,627
	{ Salt, fine, in bulk.		5c. "	2,797,950	7,983
	{ Salt, N. E. S., in bags, barrels or		7½c. "	3,668,006	18,195
	{ other packages.				
Total.				21,366,064	59,805

TABLE 4.

SALT.

IMPORTS :—SALT NOT PAYING DUTY.

Fiscal Year.	Pounds.	Value.	Fiscal Year.	Pounds.	Value.
1880.	212,714,747	\$400,167	1893.	191,595,530	281,462
1881.	231,640,610	488,278	1894.	196,668,730	328,300
1882.	166,183,962	311,489	1895.	201,691,248	332,711
1883.	246,747,113	386,144	1896.	205,005,100	338,888
1884.	225,390,121	321,243	1897.	215,844,484	312,117
1885.	171,571,209	255,719	1898.	202,634,927	293,410
1886.	180,205,949	255,359	1899.	183,046,365	267,520
1887.	203,042,332	285,455	1900.	193,554,550	295,253
1888.	184,166,986	220,975	1901.	216,271,603	339,887
1889.	180,847,800	253,009	1902.	238,648,737	385,629
1890.	158,490,075	252,291	1903.	232,708,675	361,185
1891.	195,491,410	321,239	1904*.	198,634,047	338,082
1892.	201,831,217	314,995	1905*.	196,907,500	340,954
			1906*.	203,080,000	352,214

*Salt imported from the United Kingdom, or any British possession, or imported for the use of the sea or gulf fisheries.

Following is a list of salt producers :—

The Canadian Salt Co., Ltd.....	Windsor, Ont.
The Saginaw Lumber and Salt Co.....	Sandwich, Ont.
The Western Salt Co., Ltd....	Mooretown, Ont.
Carter & Kittermaster.....	Sarnia, Ont.
Empire Salt Co.....	"
Sarnia Salt Co.....	"
Sarnia Bay Lumber, Timber and Salt Co.....	"
Elarton Salt Works Co., Ltd.....	Warwick, Ont.
Parkhill Salt Co.....	Parkhill, Ont.
Exeter Salt Works Co.....	Exeter, Ont.
Hensall Salt Works	Hensall, Ont.
Western Canada Flour Mills Co., Ltd	Goderich, Ont.
R. & J. Ransford.....	Clinton, Ont.
Stapelton Salt Works.....	Clinton, Ont.
Brussels Salt Works.....	Brussels, Ont.
Gray, Young & Sparling Co. of Ont., Ltd.....	Wingham, Ont.
Ontario People's Salt and Soda Co.....	Kincardine, Ont.
Wm. Harvie, London, Eng.....	(H. D. Buchanan, Plumweseep, N.B.)

MISCELLANEOUS NON-METALLIC.
ARSENIC.

Up to 1903 the main source of the production of arsenic in Canada was the Deloro mine in Hastings county, Ontario. The arsenic was recovered at Deloro in the process of treating the auriferous mispickel ores found in the district. In 1902, however, the mine was closed, though the mill continued to work on tailings and ore from the dump until 1903, when operations ceased altogether. This property has recently been taken over by the Deloro Mining and Reduction Company, and the plant entirely rebuilt, with the object of treating ores from Cobalt district as well as the local mispickel ores. There was no production of white arsenic at the plant, however, during 1906.

The ores shipped from the Cobalt district contain important quantities of arsenic, though only a small portion of it is paid for by the purchasing companies. The quantity of arsenic contained in these ores shipped during the past three years has been, according to information collected by the Ontario Bureau of Mines, 72 tons in 1904 ; 549 tons in 1905 ; and 1440 tons in 1906 (see table 1). The values as given in the table represent only the quantities paid for.

A plant for the reduction of the Cobalt District ores, and equipped to save the arsenic, has been erected at Copper Cliff, Ontario, by the Canadian Copper Company, the quantity of white arsenic produced during 1906 being 201 tons valued at \$14,058.

TABLE 1.
MISCELLANEOUS—NON-METALLIC.
ANNUAL PRODUCTION OF ARSENIC.

Calendar Year.	Arsenic in Ore.		White Arsenic.	
	Tons.	Value.	Tons.	Value.
1885.....			440	\$17,600
1886.....			120	5,460
1887.....			30	1,200
1888.....			30	1,200
1889.....			Nil.	Nil.
1890.....			25	1,500
1891.....			20	1,000
1892.....			Nil.	Nil.
1893.....			0	—
1894.....			7	420
1895.....			Nil.	Nil.
1896.....			0	—
1897.....			0	—
1898.....			0	—
1899.....			57	4,872
1900.....			303	22,725
1901.....			695	41,676
1902.....			800	48,000
1903.....			257	15,420
1904.....	72	8 903		
1905.....	549	2,692		
1906.....	1,440	15,858	201	14,058

TABLE 2.
MISCELLANEOUS.—NON-METALLIC.
IMPORTS OF ARSENIC.

Fiscal Year.	Pounds.	Value.	Fiscal Year.	Pounds.	Value.
1880.....	18,197	\$ 576	1894.	292,505	10,018
1881.....	31,417	1,070	1895.	1,115,697	31,932
1882.....	138,920	3,962	1896.....	664,854	27,523
1883.	51,953	1,812	1897.....	152,275	8,378
1884.....	19,337	773	1898.	291,967	14,270
1885.	49,080	1,566	1899.....	582,383	24,203
1886.....	30,181	961	1900.....	230,730	11,035
1887.....	32,436	1,116	1901.....	159,263	8,361
1888.....	27,510	1,016	1902.....	106,857	6,004
1889.....	69,269	2,434	1903.....	298,375	11,824
1890.....	138,509	4,474	1904.....	414,065	12,421
1891.....	115,248	4,027	1905.....	268,274	7,661
1892.....	302,958	9,365	1906 Duty Free.	446,975	19,169
1893... ..	447,079	\$12,907			

CHALK AND WHITING.

These materials are not produced in Canada, but statistics of their importation are given to show the market for them in Canada.

TABLE 3.
MISCELLANEOUS.—NON-METALLIC.
IMPORTS OF CHALK.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880..	\$2,117	1894.....	\$ 11,308
1881.....	2,768	1895.....	7,730
1882.....	2,882	1896.....	6,467
1883..	5,067	1897.. . . .	7,432
1884.....	2,589	1898.....	9,338
1885.....	8,003	1899..	10,461
1886.....	6,583	1900..	12,212
1887..	5,635	1901.....	11,629
1888.....	5,865	1902.....	11,337
1889.....	5,336	1903.....	16,497
1890..	7,221	1904.....	19,163
1891..	8,193	1905.....	20,896
1892.....	9,558	1906*.....	23,853
1893.....	9,966		

* Chalk prepared. Duty, 20 p.c.

TABLE 4.

MISCELLANEOUS.—NON-METALLIC.

IMPORTS OF WHITING.

Fiscal Year.	Cwt.	Value.	Fiscal Year.	Cwt.	Value.
1880.....	84,115	\$26,092	1894.....	103,633	\$26,649
1881.....	47,480	16,637	1895.....	102,751	25,441
1882.....	36,270	16,318	1896.....	113,791	27,322
1883.....	76,012	29,334	1897.....	102,453	22,541
1884.....	76,268	28,230	1898.....	166,293	25,761
1885.....	67,441	23,492	1899.....	134,884	34,310
1886.....	65,124	25,533	1900.....	127,455	34,575
1887.....	47,246	15,191	1901.....	209,868	60,878
1888.....	76,619	20,508	1902.....	153,982	42,136
1889.....	84,658	22,735	1903.....	139,804	39,867
1890.....	96,243	27,471	1904.....	186,919	42,507
1891.....	84,679	27,504	1905.....	198,485	51,215
1892.....	102,985	26,867	1906*.....	160,030	44,876
1893.....	88,835	25,563			

* Whiting or whitening, gilder's whiting, and Paris white. Duty free.

FELDSPAR.

There was a small production of feldspar from the township of Templeton, Que., the main part of the shipments, however, coming from the townships of Bedford and Portland, Frontenac county, Ontario.

Two companies furnishing statements of shipments in Ontario were the Kingston Feldspar and Mining Co., and the Verona Mining Company. The total shipments, according to returns received, were 16,948 tons valued at \$40,890.

The production at Templeton was used at Buckingham, Que., while the shipments from Ontario were all exported to the United States.

According to Customs returns the exports during 1906 were 18,183 tons valued at \$60,312.

TABLE 5.
MISCELLANEOUS - NON-METALLIC.
PRODUCTION OF FELDSPAR.

Calendar Year.	Tons.	Value.
1890.	700	\$3,500
1891.	685	3,425
1892.	175	525
1893.	575	4,525
1894.	Nil.	Nil.
1895. ....	.....	2,545
1896.	972	*2,583
1897.	1,400	3,290
1898.	2,500	6,250
1899.	3,000	6,000
1900.	318	1,112
1901.	5,350	10,700
1902.	7,576	15,152
1903.	13,928	18,966
1904.	11,083	22,166
1905.	11,700	23,400
1906.	16,948	40,890

* Exports.

FIRE-CLAY.

Returns of fire-clay production in 1906 show a total output of 6,559 tons valued at \$18,522, which was derived mainly from the clays found with the coal measures at Westville, N. S., and Comox, B.C. Part of the production at Westville was made into fire bricks which were sold at Sydney and local points, while the output at Comox was shipped to the Columbia Clay Company at Victoria and used in the manufacture of pottery and sewer pipe.

TABLE 6.
MISCELLANEOUS - NON-METALLIC.
PRODUCTION OF FIRE-CLAY.

Calendar Year.	Tons.	Value.
1889.	400	\$4,800
1890.	Nil.	Nil.
1891.	250	750
1892.	1,991	4,467
1893.	540	700
1894.	539	2,167
1895.	1,329	3,492
1896.	842	1,805
1897.	2,118	5,759
1898.	670	1,680
1899.	599	1,295
1900.	1,245	4,130
1901.	3,979	5,920
1902.	2,741	4,283
1903.	2,639	3,523
1904.	5,972	17,463
1905.	5,088	13,917
1906.	6,559	18,522

SESSIONAL PAPER No. 26b

MOULDING SAND.

The figures of production of moulding sand as given in table 7 were derived chiefly from the returns of railway shipments from points in Southern Ontario, together with a small production in Nova Scotia, and do not nearly represent the total production. The publication of the incomplete returns has, therefore, been discontinued for the present.

TABLE 7.

MISCELLANEOUS—NON-METALLIC.

PRODUCTION OF MOULDING SAND.

Calendar Year.	Tons.	Value.
1887	160	\$ 800
1888	169	845
1889	170	850
1890	320	1,410
1891	230	1,000
1892	345	1,380
1893	4,370	9,086
1894	6,214	12,428
1895	6,765	13,530
1896	5,739	11,478
1897	5,485	10,931
1898	10,572	21,038
1899	13,724	27,430
1900	6,181	12,316
1901	14,705	29,410
1902	13,352	27,651
1903	3,658	7,256
1904	3,423	6,790
1905		
1906		

* Returns incomplete.

QUARTZ.

The production of quartz as reported to the Ontario Bureau of Mines for 1906 was 48,376 tons valued at \$65,765. This was mined by the Canadian Copper Company, and Algoma Commercial Company, and used principally as a flux and for converter linings.

TABLE 8.
MISCELLANEOUS—NON-METALLIC.
ANNUAL PRODUCTION OF QUARTZ.

Calendar Year.	Tons.	Value.
1890.....	200	\$ 1,000
1891.....		
1892.....		
1893.....	100	500
1894.....		
1895.....		
1896.....	10	50
1897.....		
1898.....	284	570
1899.....	600	1,260
1900-1905.....		
1906.....	48,376	65,765

TABLE 9
MISCELLANEOUS—NON-METALLIC.
IMPORTS OF "SILEX"—CRYSTALLIZED QUARTZ.

Fiscal Year.	Cwt.	Value.
1880.....	5,252	\$ 2,290
1881.....	3,251	1,659
1882.....	3,283	1,678
1883.....	3,543	2,058
1884.....	3,259	1,709
1885.....	3,527	1,443
1886.....	2,520	1,313
1887.....	14,533	5,073
1888.....	4,808	2,385
1889.....	5,130	1,211
1890.....	1,768	2,617
1891.....	3,674	1,929
1892.....	1,429	1,244
1893.....	2,447	1,301
1894.....	2,451	1,521
1895.....	2,882	1,881
1896.....	3,289	2,174
1897.....	2,564	3,415
1898.....	3,104	2,773
1899.....	3,951	2,595
1900.....	4,021	2,876
1901.....	3,562	2,106
1902.....	4,388	3,858
1903.....	3,514	2,762
1904.....	5,547	4,409
1905.....	8,931	4,475
1906.....Duty Free.	7,465	8,347

TALC.

The production of talc in 1906 was all from the Henderson mine in Huntingdon township, Hastings county, Ontario, and the shipments were 1,234 tons valued at \$3,030. The mineral was exported to United States points, and chiefly used in the manufacture of cosmetics.

TABLE 10.
MISCELLANEOUS—NON-METALLIC.
ANNUAL PRODUCTION OF SOAPSTONE AND TALC.

Calendar Year.	Tons.	Value.	Calendar Year.	Tons.	Value.
1886.....	50	\$ 400	1897.	157	\$ 350
1887.....	100	800	1898.....	405	1,000
1888.....	140	280	1899.....	450	1,960
1889.....	195	1,170	1900.....	1,420	6,365
1890.....	917	1,239	1901.....	259	842
1891.....	Nil	Nil	1902.....	689	1,804
1892.....	1,374	6,240	1903.....	990	2,739
1893.....	717	1,920	1904.....	840	1,875
1894.....	916	1,640	1905.....	500	1,800
1895.....	475	2,138	1906.....	1,234	3,030
1896.....	410	1,230			

STRUCTURAL MATERIALS.

The structural or building materials included under this heading comprise stone such as building stone, granite, marbles, slate, flag-stones, etc , cement and lime ; and the manufactures of clay, such as bricks, tiles, drainpipe, earthenware and coarse pottery.

STONE.

Building stone.

Complete information regarding the production of building stone, excluding granite, is not available. In Ontario the production in 1906 of building and crushed stone, as per returns to the Ontario Bureau of Mines, was valued at \$660,000. For the other provinces the information is incomplete, but a rough estimate would place the total production in Canada at about \$1,830,000.

Statistics of the production of building stone are shown in table 1, the exports and imports of stone in tables 2, 3, and 4.

TABLE 1.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF BUILDING STONE.

Calendar Year.	Value.
1886.....	\$ 642,509
1887.....	552,267
1888.....	641,712
1889.....	913,691
1890.....	964,783
1891.....	708,736
1892.....	609,827
1893.....	1,100,000
1894.....	1,200,000
1895.....	1,095,000
1896.....	1,000,000
1897.....	1,000,000
1898.....	1,300,000
1899.....	1,500,000
1900.....	1,520,000
1901.....	1,650,000
1902.....	1,900,000
1903.....	1,975,000
1904.....	1,930,000
1905.....	1,830,000
1906.....	1,830,000

TABLE 2.

STRUCTURAL MATERIALS.

EXPORTS OF STONE AND MARBLE, WROUGHT AND UNWROUGHT.

Calendar Year.	Wrought.	Unwrought
1890.....	\$ 21,725	\$ 43,611
1891.....	13,398	46,162
1892.....	7,698	47,424
1893.....	9,102	12,532
1894.....	22,576	31,130
1895.....	8,587	51,616
1896.....	4,934	32,897
1897.....	9,415	42,034
1898.....	2,526	65,370
1899.....	5,092	101,931
1900.....	5,933	115,711
1901.....	5,917	157,739
1902.....	8,632	124,829
1903.....	7,684	46,295
1904.....	4,760	17,802
1905.....	3,545	13,089
1906.....	23,097	4,675

TABLE 3.

STRUCTURAL MATERIALS.

IMPORTS OF BUILDING STONE.

Calendar Year.	Value.	Calendar Year.	Value.
1880.....	\$ 35,970	1893.....	\$56,510
1881.....	58,149	1894.....	52,908
1882.....	33,623	1895.....	44,282
1883.....	35,061	1896.....	54,130
1884.....	51,088	1897.....	38,714
1885.....	30,491	1898.....	28,495
1886.....	41,675	1899.....	48,040
1887.....	54,368	1900.....	64,533
1888.....	86,373	1901.....	46,078
1889.....	100,314	1902.....	99,074
1890.....	132,155	1903.....	87,866
1891.....	170,890	1904.....	93,778
1892.....	95,550	1905.....	102,817
1906 { Flagstones, granite and rough freestone, sandstone, and all building stone, not hammered or chiselled. Duty 15 p. c... Granite and freestones, dressed; all other building stone dressed, except marble. Duty 20 p. c... ..			\$66,994
			65,134
Total.....			\$132,128

TABLE 4.
STRUCTURAL MATERIALS.
IMPORTS OF MANUFACTURES OF STONE OR GRANITE, N.E.S.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$29,408	1893.....	\$49,323
1881.....	36,877	1894.....	49,510
1882.....	37,267	1895.....	51,050
1883.....	45,636	1896.....	51,499
1884.....	45,290	1897.....	34,026
1885.....	39,867	1898.....	41,240
1886.....	41,984	1899.....	60,148
1887.....	41,829	1900.....	57,039
1888.....	47,487	1901.....	66,639
1889.....	61,341	1902.....	72,397
1890.....	84,396	1903.....	78,629
1891.....	61,051	1904.....	141,165
1892.....	39,479	1905.....	150,160
1906 { Granite—Sawn only.....Duty, 20 p.c.			\$32,316
" Finished and polished....." 35 p.c.			94,717
" Manufactures of N.O.P....." 35 p.c.			24,817
Paving blocks....." 20 p.c.			26,585
Manufactures of stone, N.O.P...." 30 p.c.			
			\$178,435

MARBLE.

There has been no production of marble reported since 1896. During the past year a small quantity of sodalite, a beautiful decorative stone, was shipped from the quarries at Bancroft being opened up by the Princess Quarries Company.

Statistics of the production of marble in former years are shown in table 5, and imports of marble in table 6.

TABLE 5.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF MARBLE.

Calendar Year.	Tons.	Value.
1886.....	501	\$9,900
1887.....	242	6,224
1888.....	191	3,100
1889.....	83	980
1890.....	780	10,776
1891.....	240	1,752
1892.....	340	3,600
1893.....	590	5,100
1894.....	Nil.	Ni
1895.....	200	2,000
1896.....	224	2,405
1897 to 1906, inclusive.....	Nil.	Nil.

TABLE 6.
STRUCTURAL MATERIALS.
IMPORTS OF MARBLE.

Fiscal Year.		Value.
1880..		\$ 63,015
1881..		85,977
1882..		109,505
1883..		128,520
1884..		108,771
1885..		102,835
1886..		117,752
1887..		104,250
1888..		94,681
1889..		118,421
1890..		99,353
1891..		107,661
1892..		106,268
1893..		96,177
1894..		94,657
1895..		83,422
1896..		90,065
1897..		77,150
1898..		95,894
1899..		101,879
1900..		94,017
1901..		96,159
1902..		130,424
1903..		153,481
1904..		181,511
1905..		145,466
1906 { Marble and manufactures of :—		
Marble sawn only.....		Duty. 20 % \$108,718
Finished and polished.....		35 %
Rough, not hammered or chiselled.....		15 % 6,827
Manufactures of, N.O.P.....		35 % 74,044
Total, marble and manufactures of....		\$189,589

GRANITE.

Granite, both for monumental and building purposes, was quarried as usual in Nova Scotia, New Brunswick, Quebec, and British Columbia.

In Nova Scotia the industry was confined to the vicinities of Halifax and Middleton, while in New Brunswick the granite industries at St. George and at Hampstead were carried on with about the same success as in immediately preceding years.

The chief sources of the granite production of Quebec in 1906 were in Chatham township, Argenteuil county, and in Stanstead tp., Stanstead county. A small production was also obtained from Rivière à Pierre in Portneuf county.

In British Columbia granite was quarried on Nelson island about 52 miles north-west of Vancouver, and on Burrard inlet opposite Croker Fold.

The total value of the production in 1906 was \$278,419. Statistics of annual production since 1886 are shown in table 7.

TABLE 7.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF GRANITE.

Calendar Year.	Tons.	Value.	Calendar Year.	Tons.	Value.
1886.....	6,062	\$63,309	1896.	18,717	\$106,709
1887.....	21,217	142,506	1897.....	10,345	61,934
1888.....	21,352	147,305	1898.....	23,897	81,073
1889.	10,197	79,624	1899.....	13,418	90,542
1890.....	13,307	65,985	1900.....		80,000
1891.....	13,637	70,056	1901.....		155,000
1892.....	24,302	89,326	1902.....		210,000
1893.....	22,521	94,393	1903.....		200,000
1894.....	16,392	109,936	1904.....		150,000
1895.....	19,238	84,838	1905.....		226,305
			1906.....		278,419

SLATE.

Slate was quarried at the New Rockland quarries, Richmond county, Que., by Messrs. Fraser & Davies. The Pacific Slate Company of Victoria were making preparations to operate their quarry, but made no shipments during 1906. The total production was valued at \$24,446, and about the same quantity has been produced annually during the past four years.

Statistics of the production, exports, and imports of slate are shown in tables 8, 9 and 10.

TABLE 8.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF SLATE.

Calendar Year.	Tons.	Value.
1886.....	5,345	\$64,675
1887.....	7,357	89,000
1888.....	5,314	90,689
1889.....	6,935	119,160
1890.....	6,368	100,250
1891.....	5,000	65,000
1892.....	5,180	69,070
1893.....	7,112	90,825
1894.....		75,550
1895.....		58,900
1896.....		53,370
1897.....		42,800
1898.....		40,791
1899.....		33,406
1900.....		12,100
1901.....	715	9,980
1902.....		19,200
1903.....		22,040
1904.....		23,247
1905.....		21,568
1906.....		24,446

TABLE 9.
STRUCTURAL MATERIALS.
EXPORTS OF SLATE.

Calendar Year.	Tons.	Value.
1884.....	539	\$6,845
1885.....	346	5,274
1886.....	34	495
1887.....	27	373
1888.....	22	475
1889.....	26	3,303
1890.....	12	153
1891.....	15	195
1892.....	87	2,038
1893.....	178	3,168
1894.....	187	3,610
1895.....	36	574
1896.....	301	8,913
1897.....	Nil.	Nil.
1898.....	Nil.	Nil.
1899.....	Nil.	Nil.
1900.....	Nil.	Nil.
1901.....	16,750	10,000
1902 to 1906.....	Nil.	Nil.

TABLE 10.
STRUCTURAL MATERIALS.
IMPORTS OF SLATE.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.....	\$21,431	1893..	\$51,179
1881.....	22,184	1894.....	29,267
1882.....	24,543	1895.....	19,471
1883.....	24,968	1896.....	24,176
1884.....	28,816	1897.....	21,615
1885.....	28,169	1898.....	24,907
1886.....	27,852	1899.....	33,100
1887.....	27,845	1900.....	53,707
1888.....	23,151	1901.....	72,187
1889.....	41,370	1902.....	72,601
1890.....	22,871	1903.....	84,437
1891.....	46,104	1904.....	86,057
1892.....	50,441	1905.....	93,228
		Duty.	
1906 {	Slate and manufactures of—		
	Mantels.....	30 %	
	Roofing slate.....	25 % not over 75c. per square	\$60,054
	School writing slates.....	25 %	20,535
	Slate pencils.....	25 %	3,329
		Slate of all kinds and manufactures of, N.E.S.	30 % 29,023
Total.....			\$112,941

FLAGSTONES.

A small quantity of flagstone is annually quarried at Bishops Crossing, Que., and sold in Sherbrooke, Iberville, St. Johns, and St. Hyacinthe. The production in 1906 was 6,600 yards, superficial measure, valued at \$5,280.

Statistics of production and imports are shown in tables 11 and 12.

TABLE 11.

STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF FLAGSTONE.

Calendar Year	Quantity, Sq. ft.	Value.
1886.....	70,000	\$ 7,875
1887.	116,000	11,600
1888.....	64,800	6,580
1889.	14,000	1,400
1890.....	17,865	1,643
1891.....	27,300	2,721
1892.....	13,700	1,869
1893.....	40,500	3,487
1894....	152,700	5,298
1895.....	80,005	6,687
1896.....		6,710
1897.....		7,190
1898.....		4,250
1899. . . .		7,600
1900.....		5,250
1901.....		4,575
1902.....	87,300	7,760
1903.....	79,200	6,688
1904.....	75,600	6,720
1905.....	81,000	7,650
1906.....	59,400	5,280

TABLE 12.

STRUCTURAL MATERIALS. .
IMPORTS OF FLAGSTONE.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
1881.....	23	\$ 241	1893.....	884	\$ 8,500
1882.	90	848	1894.....	218	2,429
1883.....	10	99	1895.....	15	84
1884.....	137	1,158	1896.....	Nil.	Nil.
1885.....	205	1,756	1897.....	13	227
1886.....	1,602	9,443	1898.....	587	1,540
1887.....	1,316	10,966	1899.....	Nil.	Nil.
1888.....	2,642	21,077	1900.....	9	63
1889.....	1,669	15,451	1901.....	14	116
1890.....	5,665	48,995	1902.....	232	1,231
1891.....	3,770	36,348	1903 to 1906*....	Nil.	Nil.
1892.....	1,571	15,048			

* Flagstones dressed. Duty, 20 %. (See table 3).

CEMENT.

The total sales of cement in 1906, including both natural and Portland, amounted to 2,128,374 barrels valued at \$3,170,859, as compared with 1,360,732 barrels valued at \$1,924,014 in 1905 ; an increase of 767,642 barrels or 56.4 p. c. in quantity, and \$1,246,845 or 64.8 p.

c. in total value. The production of Portland cement continues to show large annual increases, while the output of natural rock cement has fallen off to a few thousand barrels, the proportion of the total in 1906 being less than one-third of one per cent.

Statistics of production since 1887 are given in table 13 below :—

TABLE 13.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF CEMENT.

Calendar Year.	Natural Rock Cement.		Portland Cement.		Total.	
	Barrels.	Value.	Barrels.	Value.	Barrels.	Value.
		\$		\$		\$
1887.					69,843	81,909
1888.					50,668	35,593
1889.					90,474	69,790
1890.					102,216	92,405
1891.					93,473	108,561
1892.					117,408	147,663
1893.					158,597	194,015
1894.					108,142	144,637
1895.					128,294	173,675
1896.					149,090	201,651
1897.	85,450	65,893	119,763	209,380	205,213	275,273
1898.	87,125	73,412	163,084	324,168	250,209	397,580
1899.	117,387	119,308	255,366	513,983	396,753	633,291
1900.	125,428	99,994	292,124	562,916	417,552	662,910
1901.	133,328	94,415	317,066	565,615	450,394	660,030
1902.	127,931	98,932	594,594	1,028,618	722,525	1,127,550
1903.	92,252	74,655	627,741	1,150,592	719,993	1,225,247
1904.	56,814	50,247	910,358	1,287,992	967,172	1,338,239
1905.	14,184	10,274	1,346,548	1,913,740	1,360,732	1,924,014
1906.	8,610	6,052	2,119,764	3,164,807	2,128,374	3,170,859

NATURAL ROCK CEMENT.

Natural rock cement was made by two firms only, both in Ontario. The total sales during 1906 were 8,610 barrels valued at \$6,052, as compared with 14,184 barrels valued at \$10,274 in 1905. The prices realized at the works were 70 to 80 cents per barrel of 240 lbs. net. The extended use of Portland cement, and the preference shown for it by consumers seems, for the time at least, to be driving the natural rock product from the market.

Following is a list of firms owning plants, the first two of which only were operated during the year :—

Hamilton Cement Works.	Hamilton, Ont.
Queenston Cement Works.	Queenston, Ont.
Battle's Thorold Cement Works.	Thorold, Ont.
The Toronto Lime Co.	Toronto, Ont.
The Manitoba Union Mining Co., Ltd.	Winnipeg, Man.

PORTLAND CEMENT.

The total quantity of Portland cement made in Canada in 1906 was 2,152,562 barrels, as compared with 1,541,568 barrels in 1905, an increase of 610,994 barrels, or 39·6 p. c. The total sales of Portland cement were 2,119,764 barrels, as compared with 1,346,548 barrels in 1905, an increase of 773,216 barrels or 57·4 p. c. Additional details will be found tabulated below.

Fifteen companies were operating plants during 1906, with a total daily capacity of about 10,500 barrels, viz., one in Nova Scotia, two in Quebec, eleven in Ontario, and one in British Columbia. At least four plants were under construction during the year, of which the total initial daily capacity will be about 4,700 barrels.

Detailed statistics of production in 1905 and 1906 are as follows :—

	1905.	1906.
	Bls.	Bls.
Portland cement sold	1,346,548	2,119,764
Portland cement manufactured	1,541,568	2,152,562
Stock on hand January 1	111,446	269,558
Stock on hand December 31	306,466	302,356
Value of cement sold	\$1,913,740	\$3,161,807

*NOTE.—Some companies do not take stock at the end of the calendar year, consequently their estimates of stock on hand do not always agree from year to year.

The average price per barrel at the works in 1906 was \$1.49, as compared with \$1.42 in 1905.

The imports of Portland cement into Canada in 1906 were :—

	Quantity.	Value.
Six months ending June cwt.	945,187	\$319,021
Six months ending December "	1,485,573	459,685
The year 1906	2,430,760	\$778,706

This is equivalent to 694,503 barrels of 350 pounds each, at an average price per barrel of \$1.12. The duty is 12½c. per hundred pounds.

The imports in 1905 were equivalent to 917,558 barrels, valued at \$1,138,548, or an average price per barrel of \$1.24.

There is very little cement exported from Canada. The consumption is therefore practically represented by the Canadian sales, together with the imports.

Following is an estimate of the consumption of Portland cement in Canada for the past six years :—

Calendar Year.	Canadian.	Imported.	Total.
	Bls.	Bls.	Bls.
1901.....	317,066	555,900	872,966
1902.	594,594	544,954	1,139,548
1903.....	627,741	773,678	1,401,419
1904.....	910,358	784,630	1,694,988
905.....	1,346,548	917,558	2,264,106
1906.....	2,119,764	694,503	2,814,267

The exports and imports of cement are shown in tables 14 to 18 following. The exports of cement, as before remarked, are very small, the value in 1906 being \$7,551 only. The imports of cement are divided into three groups, of which the most important, Portland cement, amounted in 1906 to the equivalent of 694,503 barrels of 350 pounds net, valued at \$963,839. The other imports were hydraulic cement 10,794 cwt. valued at \$4,034, and cement not otherwise specified and manufactures of cement to the value of \$27,858. The imports of Portland cement showed a steady growth between 1895 and 1905 ; but began to decrease again in 1906. In 1903 and previous years there was more imported cement used than Canadian product. In 1904 and succeeding years the situation was changed, however, and more Canadian cement was used in Canada than imported, the proportion of imported Portland cement used in 1906 being about 24·6 p. c. of the total consumption.

TABLE 14.
STRUCTURAL MATERIALS.
EXPORTS OF CEMENT.

Calendar Year.	Value.
1891.....	\$ 2,881
1892.....	938
1893.....	1,172
1894.....	482
1895.....	937
1896.....	1,328
1897.....	644
1898.....	2,117
1899.....	2,733
1900	3,296
1901.....	1,514
1902.....	2,267
1903.....	2,851
1904.....	5,494
1905.....	3,143
1906.....	7,551

TABLE 15.
STRUCTURAL MATERIALS.
IMPORTS OF CEMENT IN BULK OR BAGS.

Fiscal Year.	Bushels.	Value.	Fiscal Year.	Bushels.	Value.
1880.....	65	\$ 28	1893	12,534	\$ 2,909
1881.....	579	298	1894.....	9,027	2,618
1882.....	386	86	1895.....		2,112
1883.. . . .	1,759	548	1896.....		3,672
1884.. . . .	4,626	1,236	1897.....		4,318
1885.. . . .	4,598	1,315	1898.....		3,263
1886... . . .	6,808	1,851	1899.....		8,929
1887.....	5,421	1,419	1900.		10,452
1888.	23,919	5,787	1901.....		4,890
1889.....	32,818	10,668	1902.....		12,234
1890.	21,055	5,443	1903... . . .		16,281
1891.....	11,281	2,890	1904.....		14,305
1892	14,351	3,391	1905 ⁺		18,489
			1906 ⁺		27,858

* Cement, N.E.S., and manufactures of cement, Duty 20 per cent.

TABLE 16.
STRUCTURAL MATERIALS.
IMPORTS OF HYDRAULIC CEMENT.

Fiscal Year.	Barrels.	Value.
1880.....	10,034	\$ 10,306
1881.....	7,812	7,821
1882.....	11,945	13,410
1883.....	11,659	13,755
1884.....	8,606	9,514
1885.....	5,613	5,396
1886.....	6,164	6,028
1887.....	6,160	8,784
1888.....	5,636	7,522
1889.....	5,835	7,467
1890.....	5,440	9,048
1891.....	3,515	6,152
1892.....	2,214	2,782
1893.....	4,896	8,060
1894.....	1,054	985
1895.....	5,333	7,001
1896.....	5,688	8,948
1897.....	2,494	3,937
	Cwt.	
1898.....	16,033	7,097
1899.....	1,678	694
1900.....	10,418	4,711
1901.....	17,784	6,865
1902.....	29,585	17,755
1903.....	13,690	6,333
1904.....	12,088	5,391
1905.....	16,961	10,690
1906*.....	10,794	4,034

* Duty, 12½c. per 100 lbs.

TABLE 17.
STRUCTURAL MATERIALS.
IMPORTS OF PORTLAND CEMENT.

Fiscal Year.	Barrels.	Value.	Fiscal Year.	Barrels.	Value.
1880.....		\$ 55,774	1894.....	224,150	\$280,841
1881.....		45,646	1895.....	196,281	242,813
1882.....		66,579	1896.....	204,407	242,409
1883.....		102,537	1897.....	210,871	252,587
1884.....		102,857		Cwt.	
1885.....		111,521	1898.....	1,073,058	355,264
1886.....		120,398	1899.....	1,300,424	467,994
1887.....	102,750	148,054	1900.....	1,301,361	498,607
1888.....	122,402	177,158	1901.....	1,612,432	654,595
1889.....	122,273	179,406	1902.....	1,971,616	833,657
1890.....	192,322	313,572	1903.....	2,316,853	868,131
1891.....	183,728	304,648	1904.....	2,476,388	995,017
1892.....	187,233	281,553	1905.....	3,228,394	1,234,649
1893.....	229,492	316,179	1906*.....	2,848,582	963,839

Duty, 12½c. per 100 lbs.

TABLE 18.
STRUCTURAL MATERIALS.
PRODUCTION OF ROOFING CEMENT.

Fiscal Year.	Tons.	Value.
1890.....	1,171	\$ 6,502
1891.....	1,020	4,810
1892.	800	12,000
1893.	951	5,441
1894.....	815	3,978
1895.....		3,153
1896.....	86	430
1897 to 1906 inclusive.....	Nil.	Nil.

Following is a list of companies engaged in the manufacture of Portland cement during 1906 :—

Sydney Cement Co.....	Sydney, C.B.
Crescent Cement Works.....	Longue Point, Que.
International Portland Cement Co.....	Toronto, Ont., and Hull, Que.
Canadian Portland Cement Co.....	Deseronto, Ont.
Lakefield Portland Cement Co.....	Lakefield, Ont.
Imperial Portland Cement Co.....	Owen Sound, Ont.
Owen Sound Portland Cement Co., Ltd.....	"
Grey and Bruce Portland Cement Co., Ltd.....	"
Sun Portland Cement Co.....	"
Hanover Portland Cement Co.	Hanover, Ont.
Belleville Portland Cement Co..	Belleville, Ont.
Ontario Portland Cement Co.....	Brantford, Ont.
Raven Lake Portland Cement Co.....	Toronto and Victoria Road, Ont.
National Portland Cement Co.....	Toronto and Durham, Ont.
Vancouver Portland Cement Co	Victoria, B.C.

Companies with works in process of erection, and companies proposing to erect plants :—

Colonial Portland Cement Co.....	Warton, Ont.
Superior Portland Cement Co.....	Orangeville, Ont.
Standard Portland Cement Co.....	Toronto, Ont.
Lehigh Portland Cement Co.....	Belleville, Ont.
Manitoba Portland Cement Co.....	Winnipeg, Man.
Alberta Portland Cement Co... ..	Calgary, Alta.
Western Canada Coal and Cement Co.....	Exshaw, Alta.

LIME.

Statistics of the production of lime in 1906 are more complete than have been available in past years. According to returns received, the total sales and shipments were 3,230,406 bushels valued at \$1,009,177. This simply represents the aggregate of the returns received, no allowance or estimate being made for the production of kilns not reported, of which there were undoubtedly a number.

By provinces the production was as follows :—

—	Bushels.	Value.
Nova Scotia.....	50,000	\$13,600
New Brunswick....	405,450	94,290
Quebec.....	923,563	201,816
Ontario.....	2,885,000	496,785
Manitoba.....	620,201	119,792
Alberta	240,000	56,200
British Columbia.....	106,192	26,694
	5,230,406	\$1,009,177

The production of lime in Ontario as given above is as published by the Ontario Bureau of Mines. The production in all the other provinces are from direct returns collected by this Department.

Statistics of the production, exports, and imports of lime are shown in tables 19, 20, 21.

TABLE 19.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF LIME.

Calendar Year.	Value.	Calendar Year.	Value.
1886.. .. .	\$283,755	1896 estimated.. .. .	\$ 650,000
1887.....	394,859	1897 " 	650,000
1888....	339,951	1898 " 	650,000
1889.....	362,848	1899 " 	800,000
1890.....	412,308	1900 " 	800,000
1891.....	251,215	1901 " 	830,000
1892.....	411,270	1902 " 	892,000
1893 estimated.....	900,000	1903 " 	900,000
1894 " 	900,000	1904 " 	780,000
1895 " 	700,000	1905 " 	750,000
		1906 " 	1,009,177

TABLE 20.
STRUCTURAL MATERIALS.
EXPORTS OF LIME.

Calendar Year.	Value.
1891.....	\$119,853
1892.....	121,535
1893.....	86,623
1894.....	83,670
1895.....	71,697
1896.....	70,820
1897.....	53,177
1898.....	49,594
1899.....	73,565
1900.....	80,852
1901.....	99,194
1902.....	116,009
1903.....	131,412
1904.....	73,838
1905.....	85,723
1906.....	57,072

TABLE 21.
STRUCTURAL MATERIALS.
IMPORTS OF LIME.

Fiscal Year.	Barrels.	Value.
1880.....	6,100	\$ 6,013
1881.....	5,796	4,177
1882.....	5,064	5,365
1883.....	7,623	9,224
1884.....	10,804	11,200
1885.....	12,072	11,503
1886.....	11,021	9,347
1887.....	10,835	8,524
1888.....	10,142	7,537
1889.....	13,079	9,363
1890.....	8,149	5,360
1891.....	6,259	4,273
1892.....	6,132	4,241
1893.....	6,879	4,917
1894.....	6,766	4,907
1895.....	12,008	5,743
1896.....	10,239	7,331
1897.....	16,108	10,529
1898.....	12,850	9,002
1899.....	15,720	11,124
1900.....	12,865	11,211
1901.....	19,657	14,534
1902.....	24,602	17,584
1903.....	31,108	22,470
1904.....	54,359	39,639
1905.....	98,676	71,588
1906..... Duty, 20 p. c.	134,334	93,630

CLAY PRODUCTS.

Chief amongst the clay industries is the manufacture of brick. Owing to the large number of manufacturers, and the indifference of many in the answering of circular inquiries, the statistics of production are more or less incomplete.

Returns received show total sales of clay brick of all grades during 1906 to be 523,390 thousand valued at \$4,102,590 ; as compared with 523,820 thousand valued at \$3,933,925 in 1905.

By provinces the sales in 1906 were :—

	Number.	Value.	Average price per M.
Nova Scotia.....	16,591,500	\$99,536	\$5.999
New Brunswick.....	3,725,000	29,045	7.797
Quebec.....	66,193,636	535,531	8.090
Ontario.....	342,860,000	2,539,795	7.407
Manitoba.....	54,580,955	517,065	9.473
Saskatchewan.....	12,786,000	136,022	10.638
Alberta.....	18,036,951	180,217	9.991
British Columbia.....	8,616,110	65,379	7.587
	523,390,152	4,102,590	\$7.838

The production in Ontario as given above is as published by the Ontario Bureau of Mines. The production given for the other provinces represents the direct returns to this Department.

TABLE 22.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF BUILDING BRICKS.

Calendar Year.	M.	Value.
1886		\$ 873,600
1887.....		986,689
1888.....		1,036,746
1889.....		1,273,884
1890		1,266,982
1891.....		1,061,536
1892.....		1,251,934
1893.....		1,800,000
1894.....		1,800,000
1895.....		1,670,000
1896.....		1,600,000
1897.....		1,600,000
1898.....		1,900,000
1899.....		2,195,000
1900.....		2,275,000
1901.....		2,400,000
1902.....		2,593,000
1903.....		2,832,000
1904.....		2,983,000
1905.....	523,820	3,933,925
1906.....	523,390	4,102,590

TABLE 23.
STRUCTURAL MATERIALS.
EXPORTS OF BRICKS.

Calendar Year.	M.	Value.
1891.....	246	\$ 1,163
1892.....	1,963	12,192
1893.....	6,073	44,110
1894.....	1,095	7,405
1895.....	1,655	8,665
1896.....	983	5,678
1897.....	573	2,679
1898.....	65	442
1899.....	172	1,351
1900.....	546	4,528
1901.....	646	5,189
1902.....	2,110	12,786
1903.....	891	5,699
1904.....	696	5,357
1905.....	754	5,888
1906.....	697	6,541

TABLE 24.
STRUCTURAL MATERIALS.
IMPORTS OF BUILDING BRICKS.

Fiscal Year.	Value.
1880.....	\$ 2,067
1881.....	4,281
1882.....	24,572
1883.....	14,234
1884.....	20,258
1885.....	14,632
1886.....	5,929
1887.....	2,440
1888.....	20,720
1889.....	24,585
1890.....	12,500
1891.....	9,744
1892.....	5,075
1893.....	14,108
1894.....	18,320
1895.....	4,705
1896.....	23,189
1897.....	10,336
1898.....	6,652
1899.....	21,306
1900.....	19,305
1901.....	20,677
1902.....	33,802
1903.....	28,493
1904.....	117,468
1905.....	158,122
1906.....Duty, 20 p. c.	194,897

TABLE 25.
STRUCTURAL MATERIALS.
IMPORTS OF PAVING BRICK.*

Fiscal Year.	Value.
1898	\$ 2,337
1899	23,648
1900	35,644
1901	10,414
1902	16,788
1903	18,811
1904	29,753
1905	32,578
1906	46,008

*Duty 20 p. c.

TABLE 26.
STRUCTURAL MATERIALS.
PRODUCTION OF TERRA COTTA, ETC.

Calendar Year.	Value.	Calendar Year.	Value.
1888	\$ 49,800	1897	155,595
1889	Not available.	1898	167,902
1890	90,000	1899	220,258
1891	113,103	1900	259,450
1892	97,239	1901	278,671
1893	55,704	1902	276,241
1894	65,600	1903	405,796
1895	195,123	1904-1906...	(a)
1896	83,855		

(a) Included in table 22.

TABLE 27.
STRUCTURAL MATERIALS.
PRODUCTION OF SEWER PIPES, ETC.

Calendar Year.	Value.
1888	\$266,320
1889	Not available.
1890	348,000
1891	227,300
1892	367,660
1893	350,000
1894	250,325
1895	257,045
1896	153,875
1897	164,250
1898	181,717
1899	161,546
1900	231,525
1901	248,115
1902	301,965
1903	317,970
1904	440,894
1905	382,000
1906	530,045

TABLE 28.
STRUCTURAL MATERIALS.
IMPORTS OF DRAIN TILES AND SEWER PIPES.

Fiscal Year.		Value.
1880.....		\$ 33,796
1881.....		37,368
1882.....		70,065
1883.....		70,699
1884.....		71,755
1885.....		69,589
1886.....		57,953
1887.....		71,203
1888.....		101,257
1889.....		83,215
1890.....		77,434
1891.....		87,195
1892.....		59,537
1893.....		39,001
1894.....		24,625
1895.....		21,053
1896.....		19,296
1897.....		34,286
1898.....		29,611
1899.....		33,898
1900.....		39,149
1901.....		56,083
1902.....		55,530
1903.....		57,352
1904.....		55,595
1905.....		102,395
		Duty.
1906 {	Drain tile, not glazed.....	20 % \$ 4,727
	Drain pipes, sewer pipes, chimney linings or vents, chimney tops and inverted blocks, glazed or unglazed.....	35 % 131,353
Total.....		\$136,080

TABLE 29.
STRUCTURAL MATERIALS.
ANNUAL PRODUCTION OF POTTERY.

Calendar Year.	Value.	Calendar Year.	Value.
1888.....	\$ 27,750	1897.....	\$129,629
1889.....	Not available.	1898.....	214,675
1890.....	195,242	1899..	185,000
1891.....	258,844	1900..	200,000
1892.....	265,811	1901.....	200,000
1893.....	213,186	1902..	200,000
1894.....	162,144	1903.....	200,000
1895.....	151,588	1904.....	140,000
1896.....	163,427	1905.....	120,000
		1906.....	150,000

TABLE 30.
STRUCTURAL MATERIALS.
IMPORTS OF EARTHENWARE.

Fiscal Year.	Value.	Fiscal Year.	Value.
1880.	\$322,333	1893.	\$709,737
1881.	439,029	1894.	695,514
1882.	616,731	1895.	547,935
1883.	657,886	1896.	575,493
1884.	544,586	1897.	595,822
1885.	511,853	1898.	675,874
1886.	599,269	1899.	916,727
1887.	750,691	1900.	959,526
1888.	697,082	1901.	1,114,677
1889.	697,949	1902.	1,275,093
1890.	695,206	1903.	1,406,610
1891.	634,907	1904.	1,611,356
1892.	748,810	1905.	1,636,214
Earthenware and china :—		Duty.	
1906 {	Baths, tubs and washstands, of earthenware, stone cement or clay, or of other material, N.O.P....	30 %	\$ 67,828
	Brown or coloured earthen and stoneware, and Rockingham ware.	30 %	8,363
	Decorated, printed or sponged, and all earthenware, N.E.S.	30 %	191,552
	Demijohns, churns and crocks.	30 %	10,508
	White granite or ironstone ware, C.C. or cream coloured ware.	30 %	47,960
	Tableware of china porcelain or other clay.	30 %	956,064
	China and porcelain ware.	30 %	214,013
	Earthenware tiles.	35 %	78,247
	Manufactures of earthenware, N.E.S.	30 %	117,824
Total			1,692,359

TABLE 31.
STRUCTURAL MATERIALS.
EXPORTS OF SAND AND GRAVEL.

Calendar Year.	Tons.	Value.
		\$
1893.	329,116	121,795
1894.	324,656	86,940
1895.	277,162	118,359
1896.	224,769	80,110
1897.	152,963	76,729
1898.	165,954	90,498
1899.	242,450	101,640
1900.	197,558	101,666
1901.	197,302	117,465
1902.	159,793	119,120
1903.	355,792	124,006
1904.	399,809	129,803
1905.	306,935	152,805
1906.	336,550	139,712

INDEX

	PAGE.
Letter of Transmittal.....	3
Explanatory Notes.....	5
Introduction.....	7-13
Summary of Production.....	14

METALLIC PRODUCTS.

Precious Metals—	
Gold.....	15-28
Silver.....	28-31
Copper.....	32-38
Iron.....	39-59
Lead.....	60-67
Nickel.....	68-70
Zinc.....	71-73
Miscellaneous Metallic—	
Aluminium.....	74
Antimony.....	74
Mercury.....	76
Platinum.....	77
Palladium.....	79
Tin.....	79

NON-METALLIC PRODUCTS.

Abrasive Materials—	
Corundum.....	81
Grindstones.....	82
Tripolite.....	87
Asbestos.....	88-91
Chromite.....	92-94
Coal and Coke.....	95-115
Peat.....	116
Graphite.....	117-119
Gypsum.....	120-124
Manganese.....	125
Mica.....	127
Mineral pigments—	
Ochres.....	131
Barytes.....	133
Mineral Water.....	135
Natural Gas.....	137
Petroleum.....	138-144
Phosphate.....	145
Pyrites.....	147
Salt.....	149

Miscellaneous Non-Metallic—

Arsenic.....	153
Chalk (imports).....	154
Whiting (imports).....	155
Feldspar.....	155
Fire-clay.....	156
Moulding Sand.....	157
Quartz	157
Soapstone and Talc.....	159

Structural Materials—

Building Stone.....	160
Marble.....	162
Granite.....	163
Slate.....	164
Flagstone.....	166
Cement.....	167-173
Lime.....	173
Clay Products.....	176-180
Sands and Gravel (exports)...	180

